Eeva Kerola, Tuuli McCully, and Riikka Nuutilainen

Shifting Currents: China's Import Realignment

Abstract

This paper examines recent shifts in China's import patterns in the context of elevated global geoe-conomic tensions and China's ambitions to improve its supply chain security. Using detailed trade data and a difference-in-differences approach, we investigate whether China has curtailed its imports from the countries leaning to the West – defined here as those not explicitly supporting China's claims over Taiwan. Our findings indicate that while there is evidence of a decline in imports from these countries relative to the more East-leaning bloc, the changes are concentrated in a limited number of sectors – primarily raw materials. The results suggest that despite heightened geopolitical tensions and policy rhetoric emphasizing self-reliance, China's realignment of trade flows away from the West-leaners has so far been selective.

Keywords: China, international trade, supply chains, fragmentation

JEL codes: F12, F13, F14, F51

Eeva Kerola, orcid.org/0000–0002–9602–2962. Bank of Finland, Snellmaninaukio, PO Box 160, FI-00101 Helsinki, Finland. E-mail: eeva.kerola@bof.fi

Tuuli McCully, orcid.org/0009-0006-2253-876X. Bank of Canada, 234 Wellington Street West, Ottawa, Ontario K1A 0G9, Canada. Email: tmccully@bank-banque-canada.ca

Riikka Nuutilainen, orcid.org/0000-0003-3127-2554. Bank of Finland Institute for Emerging Economies (BOFIT), Snellmaninaukio, PO Box 160, FI-00101 Helsinki, Finland. E-mail: riikka.nuutilainen@bof.fi

1 Introduction

Geoeconomic fragmentation and resultant supply chain vulnerabilities have become popular topics for research and debate among economists and policymakers. Many overlapping global developments have likely contributed to the increased interest, such as the US-China trade war, the Covid-19 pandemic, Russia's invasion of Ukraine, and elevated geopolitical tensions more broadly, all of which have resulted in supply chain disruptions of various magnitudes. As geopolitical and geoeconomic tensions are likely to stay elevated in the foreseeable future, analysis on supply chains needs to be broadened. Indeed, what ongoing supply chain shifts might tell us about the shape of the world economy in the future is an area of study that requires increased attention. China's place in this jigsaw puzzle is particularly relevant due to the combination of it being the largest trading nation globally and its rising geopolitical ambitions¹.

This paper examines how China is restructuring its supply chains amid ongoing global geoeconomic tensions and fragmentation. China overtook the United States as the world's most significant trading partner as early as 2010 (Rodarte, 2023), and its global economic influence has continued to grow since. Consequently, China's sourcing decisions can have substantial economic implications for its trading partners.

Supply chain security and resilience have been key focal points in China's policy formulation, especially since 2020. In a speech delivered in April 2020, President Xi introduced a new development model – the 'Dual Circulation Strategy' – which prioritizes strengthening domestic economic activity while maintaining openness to global trade. At the same time, he emphasized the need to deepen trade relations with allied countries as a countermeasure against hostile foreign forces. China has a long history of using trade policy as a tool of economic coercion, as well as implementing protectionist measures to support domestic producers. In addition, China has increasingly demonstrated stronger geopolitical ambitions on the global stage. It seeks to reshape the global governance system and advocates for multipolarity – meaning that China aims to become another leading global power, ideally the most dominant one. China's calls for a more equitable global order resonate particularly with countries in the Global South. At the same time, China has become more vocal about its intentions to reunify with Taiwan. Advancing these intentions – whether through

-

¹See e.g., the National Bureau of Asian Research (NBR): strategicspace.nbr.org/chinas-geopolitical-code-shaping-the-next-world-order/. According to data from the UN Trade and Development Data Hub (unctadstat.unctad.org/datacentre/), China accounted for 15% of global exports in 2024. In the same year, China was the world's second-largest economy by nominal GDP (17% share) and the largest when measured by purchasing power parity (PPP), with a 19% share, based on World Bank data (https://data.worldbank.org/).

coercive means or military action – would certainly have significant effects on global trade and on other countries' relations with China. Nonetheless, the focus of this paper is on supply chain shifts driven by China's strategic priorities. Drawing conclusions related to Taiwan falls outside the scope of this analysis.

In this paper, we study whether China is putting its "multipolar world" ambitions into practice and shifting its supply chains toward likeminded countries. We divide the world into two blocs based on countries' position towards the "One China Principle" of the People's Republic of China (PRC), those leaning toward Beijing and those that either lean towards Taipei or prefer a more neutral stance. Deploying a difference-in-differences method we are able to see if China's import source countries have shifted toward likeminded allies following two events: first, after President Xi's speech in April 2020 that placed official emphasis on self-sufficiency and decoupling from Western countries; and second, since Russia's war of aggression toward Ukraine started in February 2022. Western countries responded to the hostility by imposing unprecedented economic sanctions against Russia, which marked an escalation in global fragmentation.

We examine the exports to China and Hong Kong from 121 countries between January 2018 and July 2025, utilising granular trade data from Global Trade Tracker. We start by examining exports of all goods, followed by a breakdown by goods sections as defined in the Harmonized System for traded goods. We also specifically assess goods that can be considered critical for military systems and for maintaining a domestic industrial base. In addition to analysing the value of trade, we also consider trade volumes.

Our findings indicate that China began systematically reducing its imports from the West-leaning countries after the start of 2020, with this trend intensifying following Russia's full-scale invasion of Ukraine in February 2022. After controlling for global and specific country-related developments, the share of imports from an average West-leaning country was 0.1 percentage points lower in 2021 compared to an East-leaning country and the difference increased to 0.2–0.3 percentage points during 2022–2024. Given the average import share of a West-leaner was 1.5% in 2019, the observed decline is economically meaningful. However, these shifts are concentrated in a few specific sectors, with the most pronounced declines observed in base metals and minerals. The Western-leaning countries' average import share in value terms is around one percentage points lower for both base metals and minerals in 2025 compared to like-minded countries. For most other product categories, including common high priority items and economically critical goods, the changes in import shares are either modest or statistically insignificant.

The paper proceeds as follows. After this introduction, we discuss the current global trade fragmentation and China's self-sufficiency efforts in Section 2. Section 3 provides a brief literature review. Section 4 introduces the data and methodology, followed by Section 5, which presents our main results. Section 6 concludes.

2 Global trade fragmentation and China's drive for self-reliance

The current trend of fragmentation in global trade began at the earnest after the United States introduced hefty tariffs, especially targeting Chinese goods, in 2018 during President Trump's first term. China retaliated with its own tariffs on imports from the US. Over the following eight years, the US-China rivalry has intensified, leading to a significant decline in direct trade between the two countries.² Since 2024, the imposition of worldwide tariffs by the United States has delivered a significant shock to the global trading system. Concurrently, China's rapidly advancing technological capabilities and production capacity have increased global reliance on Chinese resources across multiple sectors. This growing dependency has raised concerns, particularly among Western nations, including the European Union. In response, many of these countries have prioritized reducing strategic dependencies on China. Policy measures have included efforts to deepen trade relations within a bloc of like-minded partners and restrict China's access to critical technologies. China, in turn, has leveraged its dominant position in several critical materials and technologies, at times signaling the possibility of restricting access for countries outside its geopolitical sphere. Simultaneously, it has intensified efforts to bolster self-sufficiency, particularly in strategic domains such as critical raw materials and advanced technologies. Furthermore, China is actively strengthening trade ties with aligned nations to secure stable access to essential resources, including food, energy, and other commodities.

China has made supply chain resilience and security a top domestic policy priority since 2020. At the meeting of the Central Financial and Economic Affairs Commission in April 2020, President Xi introduced the "Dual Circulation Strategy" for the first time³. The strategy aims to

² The US consumed Chinese value added has not seen a similar drop, however, suggesting that the Chinese-originating imports are re-routed via third countries to US. According to OECD Trade in value added (TiVA) 2025 database (https://www.oecd.org/en/tiva.html), the US final consumption of Chinese value added increased between 2018–2022, although China's share of US consumed foreign value added somewhat declined.

³ <u>https://cset.georgetown.edu/publication/xi-jinping-certain-major-issues-for-our-national-medium-to-long-term-economic-and-social-development-strategy/</u>

increase domestic consumption and innovation and to reduce the reliance on essential external inputs (domestic circulation) while supplementing domestic activity through global integration (external circulation). In May 2020, the strategy was endorsed by the Politburo Standing Committee and later prioritized at the fifth plenary session of the 19th Central Committee of the Communist Party of China in October 2020, which formulated the 14th Five-Year Plan for 2021-2025 and Long-Range Objectives Throughout the Year 2025⁶. In the same April 2020 speech, President Xi demonstrated that political motives shape the nation's supply chain decisions. He pointed out that "we must tighten international production chains' dependence on China, forming a powerful countermeasure and deterrent capability against foreigners who would artificially cut off supply [to China] [emphasis added]. Such policy priorities highlight the Chinese leadership's concerns regarding global geoeconomic fragmentation and supply chain vulnerabilities. Simultaneously, they also raise the question whether issues related to Taiwan⁸ play a part in Chinese supply chain decisions, particularly as Beijing's assertiveness toward Taiwan has intensified in recent years⁹, exemplified by President Xi's 2019 statement reserving "all necessary means" against external interference and separatist activities. ¹⁰

Together with its focus on supply chain security, China's geopolitical inclinations have become more pronounced in recent years. According to Zhou et al. (2023), Chinese policies have become more proactive in their attempts to influence established international trade rules and practices, as well as in their efforts to protect China's domestic interests. Meanwhile, research has shown that China uses economic coercion as a foreign policy tool to reward or punish countries for their like-mindedness with or aversion toward China (See e.g., Kerola et al., 2025; Fuchs and Klann, 2013). Moreover, China's President Xi has on several occasions called for "a multipolar world" 11,

_

⁴ https://merics.org/en/report/course-correction-chinas-shifting-approach-economic-globalization

⁵ https://m.yicai.com/news/100631002.html

⁶ https://news.cgtn.com/news/2020-10-30/China-s-14th-Five-Year-Plan-prioritizes-dual-circulation-innovation-V0w9FR2ZNe/index.html

⁷ <u>https://cset.georgetown.edu/publication/xi-jinping-certain-major-issues-for-our-national-medium-to-long-term-economic-and-social-development-strategy/</u>

⁸ http://eu.china-mission.gov.cn/eng/more/20220812Taiwan/202208/t20220815 10743591.htm

⁹ See e.g., https://www.cnn.com/2025/04/01/china/china-taiwan-drills-live-fire-escalation-intl-hnk, https://www.economist.com/briefing/2025/05/01/chinese-military-exercises-foreshadow-a-blockade-of-taiwan and https://www.atlanticcouncil.org/blogs/new-atlanticist/china-is-militarizing-its-coast-guard-against-taiwan-hereshow-taipei-and-its-allies-can-respond/

¹⁰ http://www.xinhuanet.com/english/2019-01/02/c 137715300.htm

¹¹ See e.g., <u>Xi calls for multi-polar world, inclusive globalization ahead of G20 Summit and General Secretary and President Xi Jinping Holds Talks with General Secretary of CPV Central Committee To Lam_Ministry of Foreign Affairs of the People's Republic of China</u>

supporting the idea of the world economy splitting into competing blocs. Indeed, China is reaching out to the Global South, convincing developing countries to agree with its "One China Principle", thereby gaining global support for potential actions regarding reunification with Taiwan in the future (see discussion in the beginning of Section 4.1).

Against such a backdrop, Russia's war in Ukraine since February 2022 has provided an opportunity for China to study how countries around the world are responding to unwarranted aggression. Indeed, the conflict has further highlighted China's need to reduce its dependence on advanced economies. China has closely studied the economic sanctions imposed by the West – such as export restrictions, the freezing of Russia's foreign exchange reserves, and the exclusion of its financial institutions from global financial systems – their consequences, and the possibilities for evading such sanctions. ¹² Indeed, China's interests are aligned with Russia's in many respects: The NATO Washington Summit Declaration in July 2024 stated that China is "a decisive enabler of Russia's war against Ukraine through its so-called "no limits" partnership and its large-scale support for Russia's defence industrial base. "¹³ Furthermore, China's increasing trade with Russia – where it already accounts for half of Russia's imports – is enabling Russia's war efforts. ¹⁴

3 Literature review

The launch of the Dual Circulation Strategy in 2020 brought forward China's policy emphasis on supply chain security and increased self-reliance, which is resulting in changes in China's economic growth drivers. As such, the strategy has been scrutinized by political economy scholars. Indeed, Brühl (2025) studies China's growth strategy, pointing out that the Chinese economy's export intensity has been significantly reduced under the strategy, while there is an evident decoupling from North America and the European Union. He finds that China's trade and investment activities are increasingly geared toward the Belt and Road Initiative¹⁵, of which membership consist largely of countries in the Global South. In a similar vein, Lo (2020) argues that the stabilization of supply chains – to counter the US decoupling, tariffs, and sanction threats, for instance – is at the heart of the internal circulation of the Dual Circulation Strategy, with state-owned enterprises taking a lead-

¹² See e.g., Cheung (2025) and Wang & Zakheim (2025).

¹³ www.nato.int/cps/en/natohq/official texts 227678.htm

¹⁴ See Simola (2025).

¹⁵ China's Massive Belt and Road Initiative | Council on Foreign Relations

ing role in implementation. His analysis confirms China's multipolar world ambitions, as he assesses that China is envisioning the new global system to be divided into three main regions: Asia, North America, and Europe, where each region is led by a regional superpower.

China is not alone in its focus on supply chain friend-shoring and geopolitical ambitions. Reflecting elevated global policy uncertainties in recent years, geoeconomic fragmentation and the realignment of partnerships have emerged as pressing issues for policymakers across the world, prompting a rapidly expanding field of literature of geoeconomics. For instance, Pierce and Yu (2023) find some evidence of fragmentation, particularly with respect to the US-China trade, yet they do not see clear evidence of a broader split into global trade blocs. Meanwhile, Alfrado and Chor (2023) document a decrease in direct US sourcing from China and an increase in China's import shares in "friendly nations". Highly relevant from the viewpoint of our research focus, Gopinath et al. (2024) provide evidence of trade and investment fragmentation along geopolitical lines since Russia's invasion of Ukraine and compare the developments to the early years of the Cold War. Similarly, Qiu et al. (2024) show stronger trade growth among geopolitically aligned countries. Bosone and Stamato (2024) reach the same conclusion, also showing broader diversion beyond US-China bilateral trade.

The difference-in-differences (DiD) method is often used to analyse trade flows in contexts that involve policy interventions or economic events that affect some countries or industries but not others. For instance, Cigna et al. (2020) use the method to study the impact of US tariffs against China on US imports, finding evidence of short-run trade diversion toward third countries because of the tariff shock. Meanwhile, Davis and Ma (2025) use the DiD approach to study the 2018 announcement by President Trump under Section 232, which imposed unilateral tariffs on steel and aluminum imports based on national security concerns. They find that countries with strong trade ties to the US have limited flexibility to respond, while other countries are able to reduce their reliance on the US by expanding their trade partnerships. In the context of military conflicts, Hinz and Monastryrenko (2019) use the DiD method to quantify the direct effect of Russia's 2014 embargo on select food and agricultural imports from Western countries on Russian consumer prices. Meanwhile, Scheckenhofer et al. (2025) utilize the DiD approach to show evidence of the sanctions on military goods – imposed following the Russian invasion of Ukraine in 2022 – being undermined by evasion though transshipment via Russia-friendly countries.

This paper contributes to the existing literature by three main ways. First, it combines the existing political economy discourse on the China's self-reliance strategy with a quantitative approach to quantify the strategy's success in reducing China's dependence on Western countries.

Second, it broadens the existing literature on global geoeconomic fragmentation by studying the role of China's economic policy in actively promoting a multipolar world. And finally, it contributes to the DiD trade policy literature by using the approach to capture the evolving effects of a broad and long-term economic policy strategy rather than one specific event, such as a tariff announcement.

4 Data and methodology

4.1 Data

The literature on global fragmentation usually divides the world into two or three blocs: namely, the US-led bloc, the China-led bloc, and sometimes also a neutral bloc. Typically, this division is made using some external measure, and there is ongoing discussion about which measure would be most suitable. The variable commonly used in recent literature is countries' voting records in the UN General Assembly (see e.g., Bosone & Stamato 2024; Gopinath et al. 2024; Kerola et al. 2024; and Qiu et. al 2024). In this paper, we introduce a China-specific measure for dividing the world into two blocs: countries leaning East and those leaning West. The division is based on countries' diplomatic positions regarding Taiwan by utilizing a dataset created by Herscovitch (2025) at Lowy Institute. 16 According to Beijing, Taiwan is part of the Chinese state represented by the PRC and thus cannot be recognized as a sovereign state. Dividing countries according to their stance on the Taiwan issue is particularly meaningful in this context, as China's leadership has repeatedly emphasized that reunification is inevitable¹⁷. The findings by Gopinath et al. (2024), which show the global economy fragmenting into blocs along geopolitical fault lines since Russia's invasion of Ukraine, make the Taiwan question a clear corresponding geopolitical fault line for a China-centric global conflict, which China is unlikely to overlook when planning its supply chains and economic dependencies.

Our measure for selecting China-friendly countries is based on Herscovitch (2025), which places UN member states into five categories: 1) Team Taipei; 2) Status Quo-ists; 3) Mixed Signallers; 4) Beijing Leaners; and 5) Beijing Backers. We create a Taiwan-dummy variable by giving a value of one to groups 1–3, i.e. those countries that have not given support to Beijing's reunification

¹⁷ https://www.reuters.com/world/china/xi-says-no-one-can-stop-chinas-reunification-with-taiwan-2024-12-31/

¹⁶ Lowy Institute: Five One-Chinas: The contest to define Taiwan - Lowy Institute

ambitions. Throughout the paper, we call these West-leaning countries. According to the Lowy Institute, groups 1–3 have either diplomatic relations with the Republic of China (Taiwan)¹⁸ or manifest a somewhat vague position toward the Taiwan issue. Meanwhile, Beijing Leaners (group 4) endorse the PRC's one-China principle and affirm China's sovereignty over Taiwan, while the Beijing Backers (group 5) support the PRC's efforts to "achieve national reunification" without specifying that such efforts should be peaceful, thereby arguably giving consent to the PRC to use force to take control of Taiwan; these groups are assigned a dummy value of zero. These countries are called East-leaning. Within our country sample, there are 53 countries belonging to groups 1–3 and 68 to groups 4 and 5. Countries are listed in the Appendix. To our knowledge, this is the first paper to use this measure to form trading blocs.

We utilise goods trade data at HS6-digit level from Global Trade Tracker, ¹⁹ a private data provider that sources trade data from various government agencies from majority of countries in the world. The trade data are valued in US dollars in monthly frequency between January 2018 and July 2025. We also utilise the information on trade quantities (i.e. volumes) provided by GTT, which has developed a unit conversion tool that allows for unit harmonization across goods categories to kilograms. For the purposes of this paper, we define China as mainland China and Hong Kong, given that Hong Kong is a significant entry point for goods arriving in China. We focus on countries' export data rather than Chinese import data to reduce any classification biases that could potentially be used to disguise either imported products or source countries. Taiwan is left out of the sample. In total, we have 121 countries in our sample for which detailed monthly trade data are available. Table 1 presents summary statistics for the average import share (from China's perspective) of countries in the two blocs: West-leaners and East-leaners. On average, a West-leaner's share of China's total imports was 1.5% in 2019, while the average import share of an East-leaner was 0.3 %.

At first, we focus on the geographical distribution of China's imports (i.e. exporter-reported exports) of all goods sections separately. For certain goods sections where we see a clear difference between the two blocs (namely base metals and mineral products), we further look at the sections' subcategories. Later we turn to goods that can be considered critical for military systems and for maintaining a domestic industrial base. As such, we study those goods categories whose exports to Russia have been sanctioned by Western countries since Russia's invasion of Ukraine. We take the

¹⁸ Ministry of Foreign Affairs, Republic of China (Taiwan)-Diplomatic Allies

¹⁹ www.globaltradetracker.com/

most recent list of common high priority items²⁰ that include goods in fifty HS6-level categories as well as the list of economically critical goods²¹ containing goods in thirty HS6-level categories. The common high priority items group is further divided to six sub-categories as defined by the European Commission in its announcement²².

Table 1. Summary statistics of West-leaners' and East-leaners' total import shares.

West-leaners	s' share of Ch	inese impo	rts (total)				
	2019	2020	2021	2022	2023	2024	2025
Mean	1.51	1.50	1.48	1.41	1.38	1.49	1.78
Median	0.28	0.33	0.31	0.22	0.20	0.25	0.31
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max	12.07	12.30	11.59	11.22	10.73	10.70	11.98
East-leaners'	share of Chir	nese impor	ts (total)				
	2019	2020	2021	2022	2023	2024	2025
Mean	0.32	0.33	0.37	0.42	0.47	0.45	0.50
Median	0.03	0.02	0.03	0.03	0.04	0.04	0.04
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max	4.71	5.91	6.25	7.82	7.02	6.88	7.36

Source: Global Trade Tracker and authors' calculations.

A substantial part of exports to China originates from the West-leaning countries (Figure 1), reflecting the fact that such countries typically are advanced economies producing goods that China needs. China sources common high-priority items—mostly high-tech electronics and components—primarily from the West-leaners, which include most developed economies (Figure 2). The same is true for economically critical goods, however, the export value of these goods to China is significantly lower than that of common high-priority items.

Trade value alone may not fully capture shifts or diversification in the supplier network of critical goods. When examining the average number of exporters (defined as countries with monthly exports to China and Hong Kong exceeding USD 1,000), we do not observe any significant change in the number of West or East-leaning exporters in recent years (Figure 3).

²¹ LIST OF ECONOMICALLY CRITICAL GOODS (Version of 24 February 2025)

²⁰ List of common high priority items

²² Tier 1 comprises of integrated circuits; Tier 2 electronics items related to wireless communications, satellite-based radio-navigation and passive electronic components; Tier 3A discrete electronic components, electrical plugs and connectors, navigation equipment and digital cameras; Tier 3B mechanical and non-electronic components, such as bearings and optical components; Tier 4A manufacturing equipment for production and quality testing of electric components and circuits; and Tier 4B computer numerical control (CNC) machine tools for working metal, and related components.

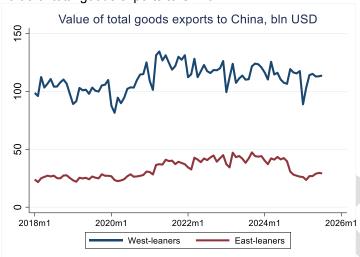
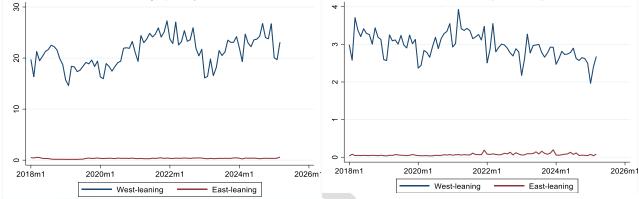


Figure 1. Value of total goods exports to China.

Source: Global Trade Tracker and authors' calculations. Note: Value of exports to China and Hong Kong.



Figure 2. Value of exports to China of common high priority items (left) and economically critical goods (right).



Source: Global Trade Tracker and authors' calculations. Note: Value of exports to China and Hong Kong.

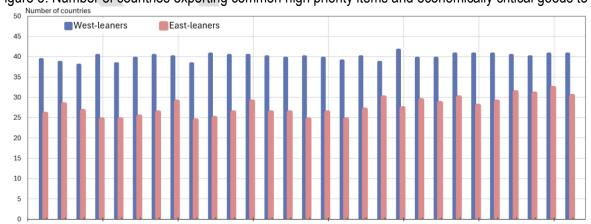


Figure 3. Number of countries exporting common high priority items and economically critical goods to China.

Source: Global Trade Tracker and authors' calculations. Note: Number of countries whose total monthly exports of common high priority items and economically critical goods to China and Hong Kong exceeds USD1,000.

4.2 Methodology

We employ a difference-in-differences (DiD) approach using a country-month panel dataset. The treatment group consists of countries that do not directly support the PRC's Taiwan-reunification efforts, which we refer to as the "West-leaning bloc". Our focus is on identifying potential changes over time in China's import origins. To this end, we include an interaction term between the annual dummies and the treatment dummy in the estimations to capture the evolving effects of a long-term economic policy strategy. The estimated equation is:

$$y_{c,i,t} = \beta_0 + \beta_1 (d_c * A_t) + \beta_2 d_c + \beta_3 A_t + \alpha_c + u_{i,t}, \tag{1}$$

where y is the share (in percentage points) of country c's exports to China in the total exports to China by all countries in the sample for product group i at month t: $y_{c,i,t} = \frac{X_{c,i,t}}{\sum_{c=1}^{C} X_{c,i,t}}$, d is the treatment group indicator equalling one for countries belonging to the West-leaning bloc, and A are the annual time dummies. β_0 is a constant, β_2 contains the controls for permanent differences between the two group of countries, β_3 contains the controls for annual trend common to both groups, and finally β_1 is the difference-in-differences estimate, i.e., the remaining differences in y between the two groups. Estimations include country fixed effects, α_c .

In addition to using annual dummy interactions, we use monthly interactions to further uncover the dynamics of the treatment effect over time. The estimated equation remains otherwise unchanged, except for the substitution of monthly dummies in place of annual ones. We plot these resulting coefficients along with their confidence intervals, allowing us also to formally check the validity of our identification strategy and the pre-treatment parallel trend assumption.

5. Results

5.1. All goods sections

We first start with China's total imports as well as with various goods sections²³ separately as per the classification of goods in the Harmonized System Codes. Table 2 presents the estimation results

²³ Section 1: Live animals: animal products; Section 2: Vegetable products; Section 3: Animal, vegetable or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes; Section 4: Prepared foodstuffs; beverages, spirits and vinegar; tobacco and manufactured tobacco substitutes; Section 5: Mineral products; Section 6: Products of the chemical or allied industries; Section 7: Plastics and articles thereof; rubber and articles thereof; Section 8: Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travel

for all goods sections, using interactions between annual dummies and the west-leaning group indicator. The findings indicate that, starting in 2021, the share of China's total imports originating from West-leaning bloc countries declined compared to imports from the East-leaning countries. This negative and statistically significant difference suggests that China has systematically begun to realign its supply chains away from the West-leaning bloc. The estimated coefficient implies that the share of imports from an average West-leaning country was 0.1 percentage points lower in 2021 and the difference increased to 0.2–0.3 percentage points during 2022–2024. Given that an average import share of a country in West-leaning bloc was 1.5% in 2019, the observed decline is also economically meaningful.

Figure 4 complements these results by illustrating the monthly difference-in-differences parameter estimates for various good categories, along with their 95 % confidence intervals. The figures highlight the timing and magnitude of the observed shifts, confirming that for total goods and some of the goods sections the divergence in import shares started to shift during 2020 and became more pronounced after early 2022. The parallel trend assumption largely holds prior 2020, lending credibility to the identification strategy.

When looking at different goods sections, it seems that the result is driven predominantly by agricultural and food products (sections 1, 3, and 4) as well as raw materials, specifically base metals and articles thereof (section 15), mineral products (section 5) and wood and pulp (sections 9 and 10)²⁴. For agricultural and food products, the difference in import shares ranges between 0.3 and 2.2 p.p. Meanwhile, the difference in import shares varies from 0.6 to 1.2 p.p. for base metals and articles thereof and from 0.4 to 1.0 p.p. for mineral products.

-

studied independently.

goods, handbags and similar containers; articles of animal gut (other than silk-worm gut); Section 9: Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, of esparto or of other plaiting materials; basketware and wickerwork; Section 10: Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard; paper and paperboard and articles thereof; Section 11: Textiles and textile articles; Section 12: Footwear, headgear, umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof; prepared feathers and articles made therewith; artificial flowers; articles of human hair; Section 13: Articles of stone, plaster, cement, asbestos, mica or similar materials; ceramic products; glass and glassware; Section 14: Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof; imitation jewellery; coin; Section 15: Base metals and articles of base metal; Section 16: Machinery and mechanical appliances; electrical equipment; parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles; Section 17: Vehicles, aircraft, vessels and associated transport equipment; Section 18: Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; clocks and watches; musical instruments; parts and accessories thereof; Section 19: Arms and ammunition; parts and accessories thereof; Section 20: Miscellaneous manufactured articles; Section 21: Works of art, collectors' pieces and antiques.

In estimations, Sections 1-4 are grouped together as food & beverages; Sections 8, 11, and 12 are grouped together as textiles & footwear; Sections 9 and 10 are grouped together as wood & pulp; and Sections 20 and 21 are grouped together as misc. & art. The remaining sections are

²⁴ China's raw material imports from Russia (a like-minded country) have increased substantially in recent years, although the import share remains modest. The results are robust for excluding Russia from the sample.

Table 2. Estimation results with annual dummies and West-leaning group's interactions. All goods sections.

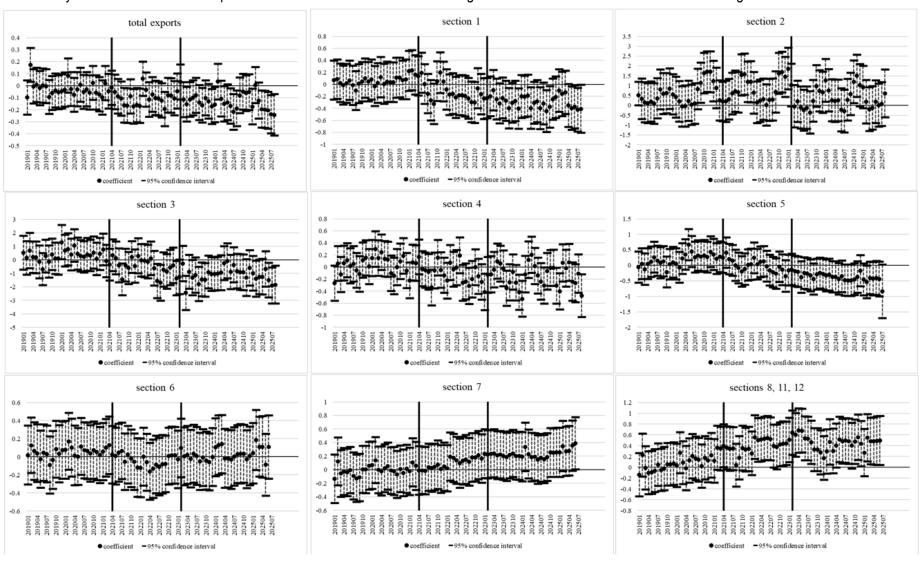
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
																optical,		
																photographi		
		live		animal or	prepared						articles of	pearls,				с,		
		animals,		vegetable	foodstuffs,						stone,	stones,	base metals	machinery,		measuring,		
		animal	vegetable	fats and	beverages,	mineral		plastic and	textiles,	wood and	plaster,	precious	and articles	electrical	vehicles	surgical	arms and	misc. and
		products	products	oils, waxes	tobacco	products	chemicals	rubber	footwear	pulp	cement	metals	thereof	equipment	and aircraft	instruments	ammunition	arts
VARIABLES	total	sec1	sec2	sec3	sec4	sec5	sec6	sec7	sec81112	sec910	sec13	sec14	sec15	sec16	sec17	sec18	sec19	sec2021
_2018_west	0.068**	0.076	-0.398*	0.148	0.057	-0.062	-0.027	0.115	0.407***	0.085	0.031	0.062	0.139	0.069	0.002	0.013	17.008	0.239
	(0.035)	(0.075)	(0.227)	(0.269)	(0.072)	(0.117)	(0.098)	(0.102)	(0.093)	(0.097)	(0.115)	(0.260)	(0.112)	(0.092)	(0.179)	(0.100)	(11.262)	(0.167)
_2020_west	-0.019	-0.027	0.246	0.430*	-0.009	0.262**	0.070	-0.017	-0.047	-0.014	-0.047	-0.164	-0.171	0.017	0.024	-0.008	0.182	0.020
	(0.035)	(0.075)	(0.227)	(0.259)	(0.072)	(0.117)	(0.097)	(0.101)	(0.093)	(0.097)	(0.114)	(0.261)	(0.113)	(0.092)	(0.180)	(0.100)	(6.304)	(0.170)
_2021_west	-0.104***	-0.032	0.364	-0.327	-0.170**	0.057	-0.000	0.025	-0.018	-0.007	-0.036	0.018	-0.172	0.023	0.012	-0.046	0.576	0.031
	(0.035)	(0.075)	(0.228)	(0.260)	(0.072)	(0.117)	(0.098)	(0.101)	(0.094)	(0.098)	(0.114)	(0.261)	(0.111)	(0.092)	(0.178)	(0.100)	(6.540)	(0.167)
_2022_west	-0.197***	-0.294***	0.280	-0.730***	-0.227***	-0.114	-0.137	0.012	0.053	-0.099	0.054	0.158	-0.627***	0.020	-0.071	-0.050	-10.008	0.026
	(0.035)	(0.076)	(0.230)	(0.270)	(0.073)	(0.117)	(0.098)	(0.102)	(0.094)	(0.098)	(0.115)	(0.259)	(0.111)	(0.092)	(0.177)	(0.101)	(6.770)	(0.169)
_2023_west	-0.263***	-0.384***	-0.123	-1.618***	-0.252***	-0.354***	-0.093	0.034	0.005	-0.188*	0.052	0.116	-0.685***	0.023	0.038	-0.040	-2.705	0.006
	(0.035)	(0.076)	(0.231)	(0.272)	(0.073)	(0.118)	(0.098)	(0.102)	(0.094)	(0.098)	(0.115)	(0.262)	(0.112)	(0.092)	(0.178)	(0.100)	(6.904)	(0.169)
_2024_west	-0.167***	-0.409***	0.088	-1.026***	-0.258***	-0.487***	-0.042	0.011	-0.004	-0.292***	0.087	0.181	-0.673***	0.035	0.018	-0.029	-4.402	-0.010
	(0.036)	(0.078)	(0.234)	(0.275)	(0.073)	(0.119)	(0.099)	(0.103)	(0.096)	(0.100)	(0.116)	(0.266)	(0.113)	(0.093)	(0.179)	(0.101)	(6.711)	(0.170)
_2025_west	0.019	-0.502***	-0.448*	-2.151***	-0.203**	-1.011***	-0.329***	-0.225*	-0.217*	-0.798***	-0.350**	-0.220	-1.173***	-0.307**	-0.354	-0.517***	1.069	-0.408*
	(0.041)	(0.090)	(0.267)	(0.311)	(0.085)	(0.149)	(0.123)	(0.127)	(0.122)	(0.125)	(0.144)	(0.325)	(0.149)	(0.125)	(0.235)	(0.131)	(11.704)	(0.210)
Constant	0.711***	1.048***	1.086***	1.717***	0.975***	1.070***	0.982***	0.937***	0.862***	1.010***	0.991***	1.138***	0.872***	0.678***	1.386***	0.997***	6.960***	1.156***
	(0.009)	(0.024)	(0.074)	(0.088)	(0.021)	(0.040)	(0.033)	(0.035)	(0.033)	(0.033)	(0.041)	(0.067)	(0.036)	(0.029)	(0.060)	(0.034)	(0.992)	(0.054)
Observations	10,249	8,298	7,873	5,159	8,411	8,020	8,128	7,829	8,720	8,338	6,269	6,465	8,639	8,604	6,249	7,074	1,173	6,878
R-squared	0.020	0.015	0.003	0.026	0.007	0.021	0.006	0.006	0.015	0.014	0.007	0.002	0.021	0.005	0.004	0.007	0.010	0.004
Number of country_id	121	121	120	109	121	115	120	120	120	118	117	115	120	120	119	120	44	119

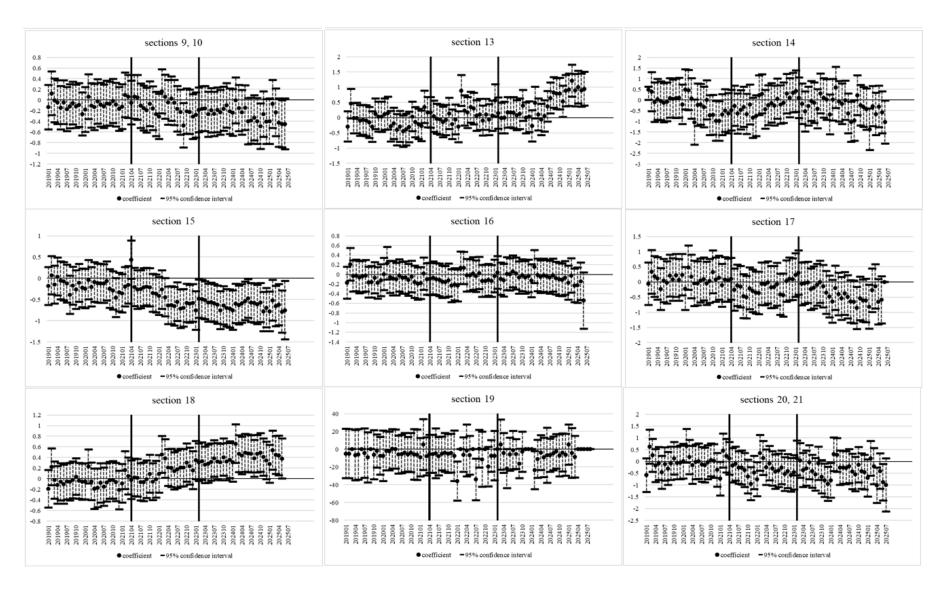
Standard errors in parentheses

Source: Global Trade Tracker and authors' calculations.

^{***} p<0.01, ** p<0.05, * p<0.1

Figure 4. Monthly difference-in-differences parameter estimates in different trade categories and their 95 % confidence intervals. All goods sections.





Source: Global Trade Tracker and authors' estimations. Note: The first of the two vertical lines denotes April 2020, the introduction of the Dual Circulation Strategy by President Xi Jinping. The second line denotes February 2022, the onset of Russia's full-scale invasion of Ukraine.

5.2. Subcategories of certain goods sections

Further analysis of specific goods sections is presented in Tables 3 and 4, which focus on subcategories of base metals and products thereof (section 15) and mineral products (section 5), respectively. The results show that the decline in import shares from the West-leaning countries is evident in certain subcategories, though the magnitude and statistical significance vary across product groups. Figures 5 and 6 provide monthly estimates for these subcategories, revealing when and how trade shares diverged between country groups.

Table 3. Estimation results with annual dummies and west-leaner interactions. Subcategories of section 15

acada	/haaa	motolo	ممط	ortiolog	thoroof\
uoous i	Dase	metais	anu	articles	thereof).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
									otehr base	tools,	
									metals,	implements,	
		articles of	copper and	nickel and	aluminium	lead and	zinc and	tin and	cermets,	cutler, parts	misc.articles
	iron and	iron and	articles	articles	and articles	articles	articles	articles	articles	thereof of	of base
	steel	steel	thereof	thereof	thereof	thereof	thereof	thereof	thereof	base metal	metal
VARIABLES	sub72	sub73	sub74	sub75	sub76	sub78	sub79	sub80	sub81	sub82	sub83
_2018_west	0.683**	0.060	-0.275*	-0.119	0.026	0.027	0.381***	0.032	-0.000	0.040	0.026
	(0.300)	(0.045)	(0.156)	(0.222)	(0.072)	(0.031)	(0.055)	(0.062)	(0.020)	(0.029)	(0.016)
_2020_west	-0.623**	-0.330***	0.036	-0.499**	-0.108	-0.035	0.036	-0.102	-0.007	-0.159***	-0.087***
	(0.301)	(0.045)	(0.158)	(0.230)	(0.071)	(0.030)	(0.055)	(0.064)	(0.020)	(0.030)	(0.016)
_2021_west	-1.092***	-0.415***	0.355**	0.026	-0.058	-0.044	0.028	-0.019	-0.031	-0.182***	-0.096***
	(0.297)	(0.044)	(0.155)	(0.220)	(0.069)	(0.031)	(0.054)	(0.062)	(0.020)	(0.030)	(0.016)
_2022_west	-2.201***	-0.515***	0.130	-0.894***	-0.168**	-0.036	0.034	-0.750***	-0.048**	-0.221***	-0.124***
	(0.300)	(0.044)	(0.154)	(0.225)	(0.070)	(0.037)	(0.057)	(0.066)	(0.020)	(0.030)	(0.016)
_2023_west	-2.604***	-0.478***	0.209	-1.302***	-0.286***	-0.024	0.086	-0.728***	-0.055***	-0.219***	-0.125***
	(0.297)	(0.044)	(0.154)	(0.227)	(0.069)	(0.033)	(0.056)	(0.063)	(0.020)	(0.029)	(0.016)
2024 west	-2.743***	-0.393***	0.424***	-2.591***	-0.212***	-0.022	0.082	-0.640***	-0.032	-0.196***	-0.105***
	(0.303)	(0.044)	(0.153)	(0.227)	(0.068)	(0.030)	(0.056)	(0.063)	(0.021)	(0.029)	(0.016)
2025 west	-3.336***	-0.425***	0.493**	-2.695***	0.049	-0.018	-0.015	-0.639***	-0.084**	-0.200***	-0.099***
	(0.491)	(0.070)	(0.241)	(0.359)	(0.105)	(0.048)	(0.091)	(0.092)	(0.034)	(0.047)	(0.025)
Constant	1.773***	0.610***	1.843***	0.347***	0.299***	0.055***	0.264***	0.016	0.143***	0.282***	0.179***
	(0.100)	(0.015)	(0.055)	(0.066)	(0.025)	(0.009)	(0.017)	(0.015)	(0.006)	(0.010)	(0.005)
Observations	4,785	5,748	6,520	2,771	6,144	1,759	3,005	1,832	3,193	4,438	4,702
R-squared	0.050	0.120	0.036	0.095	0.021	0.042	0.079	0.205	0.024	0.120	0.111
Number of country id	99	98	93	64	97	69	73	53	72	96	94

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Global Trade Tracker and authors' estimations.

For base metals and articles thereof (Table 3 and Figure 5), the results are most pronounced for subcategories 72 (iron and steel), 73 (articles of iron and steel), 75 (nickel and articles thereof), 82 (tools, implements, cutlery of base metals; parts thereof of base metals), and 83 (miscellaneous articles of base metals). The decline in import shares begins already in 2020. The largest impact is observed for iron and steel and nickel: the average import share of a West-leaning country for iron and steel is 3.3 percentage points and for nickel 2.7 percentage points lower in 2025 than for an East-leaning country.

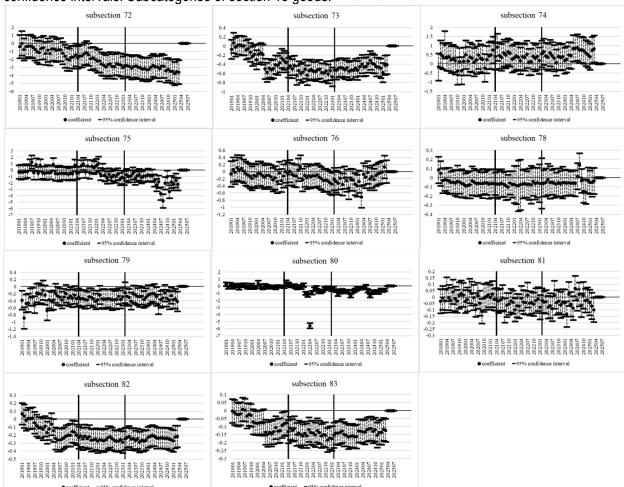


Figure 5. Monthly difference-in-differences parameter estimates in different trade categories and their 95 % confidence intervals. Subcategories of section 15 goods.

Source: Global Trade Tracker and authors' estimations. Note: The first of the two vertical lines denotes April 2020, the introduction of the Dual Circulation Strategy by President Xi Jinping. The second line denotes February 2022, the onset of Russia's full-scale invasion of Ukraine.

For mineral products (Table 4 and Figure 6), the share of a West-leaning country imports has decreased relatively more since 2022 for subcategories 26 (ores, slag and ash) and 27 (mineral fuels and oils and products of their distillation, mineral waxes). The difference in import shares in 2025 is 1.0 p.p. for ores, slag and ash and 1.5 p.p. for mineral fuels and oils.

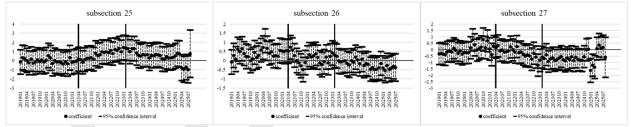
Table 4. Estimation results with annual dummies and west-leaning interactions. Subcategories of section 5 goods (mineral products)

goods (Illineral	producis	·)·	
	(1)	(2)	(3)
			mineral
	salt,		fuels,
	sulphur,		mineral oils
	earths and		and
	stone,		products of
	plastering		theri
	materials,		distillation,
	lime and	ores, slag	mineral
	cement	and ash	waxes
VARIABLES	sub25	sub26	sub27
2010	0.475	0.204***	0.454
_2018_west	0.175	-0.304***	0.151
	(0.275)	(0.108)	(0.195)
_2020_west	-0.016	0.212*	0.354*
	(0.273)	(0.108)	(0.199)
_2021_west	0.059	-0.056	0.239
	(0.270)	(0.109)	(0.198)
_2022_west	0.441	-0.153	-0.017
	(0.270)	(0.109)	(0.200)
_2023_west	0.332	-0.237**	-0.483**
	(0.273)	(0.110)	(0.198)
_2024_west	-0.072	-0.561***	-0.382*
	(0.275)	(0.111)	(0.200)
_2025_west	0.034	-1.049***	-1.498***
	(0.331)	(0.132)	(0.239)
Constant	1.410***	1.614***	1.689***
	(0.096)	(0.038)	(0.067)
Observations	6,424	5,600	5,385
R-squared	0.002	0.026	0.030
Number of country_id	109	102	107
Standard errors in parent		102	107

*** p<0.01, ** p<0.05, * p<0.1

Source: Global Trade Tracker and authors' estimations.

Figure 6. Monthly difference-in-differences parameter estimates in different trade categories and their 95 % confidence intervals. Subcategories of section 5 goods.



Source: Global Trade Tracker and authors' estimations. Note: The first of the two vertical lines denotes April 2020, the introduction of the Dual Circulation Strategy by President Xi Jinping. The second line denotes February 2022, the onset of Russia's full-scale invasion of Ukraine.

5.3. Sanctioned goods

To provide further insights regarding China's import flow shifts at a more detailed level, we next study those goods whose exports to Russia have been placed under sanctions by Western countries since Russia's invasion of Ukraine in 2022. Although the sanctions do not target China, any changes in the import source countries for these goods would suggest that China is mindful of potentially being cut off from these goods' supply chains in the future. Table 5 reports estimation results for

categories of "common high priority items²⁵" and "economically critical goods²⁶". We look at different product groups separately: non-sanctioned goods, common high priority items (chpi) and its six sub-categories (chpi1, chpi2, chpi3a, chpi3b, chpi4a, chpi4b)²⁷, as well as economically critical goods (ecg)²⁸.

Table 5. Estimation results with annual dummies and west-leaning interactions. Sanctioned goods.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		CHIP	chpi1	chpi2	chpi3a	chpi3b	chpi4a	chpi4b	ECG
									Economicall
									y critical
					discrete		manufacturi		goods: e.g-
					electronic		ng	computer	articles of
					components,		equipment	numerical	iron and
				electronics	eletrical		for	control	steel,
				related to	plugs and	mechanical	production	machine	machinery,
		Common		wireless	connectors,	and non-	of electorinc	tools for	electronics,
	non-	high priority	integrated	communicati	navigation	electronic	components	working	vehicles,
VARIABLES	sanctioned	items	circuits	on	equipment	components	and circuits	metal	ships
_2018_west	0.082*	0.010	0.007	0.022	0.011	0.035	-0.005	-0.001	0.005
	(0.044)	(0.049)	(0.055)	(0.059)	(0.064)	(0.195)	(0.094)	(0.078)	(0.039)
_2019_west	0.059	0.018	0.023	0.017	0.006	0.025	-0.008	-0.000	-0.004
	(0.044)	(0.049)	(0.055)	(0.059)	(0.064)	(0.195)	(0.094)	(0.078)	(0.039)
_2021_west	-0.141***	0.015	0.020	0.024	-0.008	-0.005	-0.002	-0.002	-0.026
	(0.044)	(0.049)	(0.055)	(0.059)	(0.064)	(0.195)	(0.094)	(0.078)	(0.039)
_2022_west	-0.285***	0.006	0.018	-0.019	-0.010	-0.102	-0.019	-0.000	-0.054
	(0.044)	(0.049)	(0.055)	(0.059)	(0.064)	(0.195)	(0.094)	(0.078)	(0.039)
_2023_west	-0.319***	0.003	0.035	-0.216***	-0.045	-0.067	-0.011	-0.005	-0.080**
	(0.044)	(0.049)	(0.055)	(0.059)	(0.064)	(0.195)	(0.094)	(0.078)	(0.039)
_2024_west	-0.287***	0.013	0.033	-0.189***	-0.030	-0.035	0.016	-0.008	-0.036
	(0.044)	(0.049)	(0.055)	(0.059)	(0.064)	(0.195)	(0.094)	(0.078)	(0.039)
_2025_west	-0.087	-0.009	0.026	-0.203**	-0.126	-0.032	0.019	-0.022	-0.043
	(0.070)	(0.078)	(0.087)	(0.093)	(0.102)	(0.309)	(0.149)	(0.123)	(0.061)
Constant	0.952***	0.952***	0.952***	0.952***	0.952***	0.952***	0.952***	0.952***	0.952***
	(0.016)	(0.017)	(0.019)	(0.021)	(0.023)	(0.069)	(0.033)	(0.028)	(0.014)
Observations	9,135	9,135	9,135	9,135	9,135	9,135	9,135	9,135	9,135
R-squared	0.020	0.000	0.000	0.005	0.000	0.000	0.000	0.000	105
Number of country id	105	105	105	105	105	105	105	105	0.001

 $Standard\ errors\ in\ parentheses$

Source: Global Trade Tracker and authors' estimations.

There is some evidence that the share of imports from the West-leaning bloc of the chpi2 category (electronics items related to wireless communications, satellite-based radionavigation and passive

²⁶LIST OF ECONOMICALLY CRITICAL GOODS (Version of 24 February 2025)

^{***} p<0.01, ** p<0.05, * p<0.1

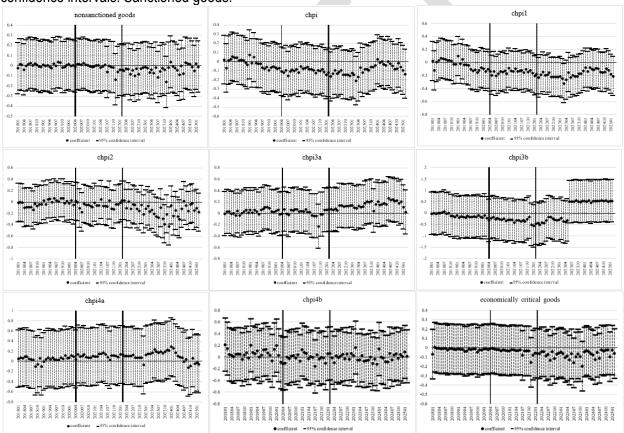
²⁵List of common high priority items

²⁷ chpi1 comprises of integrated circuits; chpi2 electronics items related to wireless communications, satellite-based radio-navigation and passive electronic components; chpi3a discrete electronic components, electrical plugs and connectors, navigation equipment and digital cameras; chpi3b mechanical and non-electronic components, such as bearings and optical components; chpi4a manufacturing equipment for production and quality testing of electric components and circuits; and chpi4b computer numerical control (CNC) machine tools for working metal, and related components.

²⁸ The list of economically critical goods includes 30 HS codes, covering items from the following HS chapters: 73 (articles of iron and steel), 84 (machinery), 85 (electronics), 87 (vehicles), and 89 (ships, boats and floating structures).

electronic components) declined starting from 2023. The difference in import share is 0.2 percentage points annually from 2023 to 2025. For all other subcategories of common high priority goods and economically critical goods, we do not see any difference in import shares between the West-leaning and East-leaning countries. The results indicate that the average negative and statistically significant difference in total trade visible for the West-leaning block after 2020 is primarily driven by non-sanctioned goods. At the same time, we do not observe any increase in Chinese imports of sanctioned goods from the West-leaning countries. Accordingly, our results do not provide evidence that the sanctions imposed on Russia have been circumvented via China after 2022.

Figure 7. Monthly difference-in-differences parameter estimates in different trade categories and their 95 % confidence intervals. Sanctioned goods.



Source: Global Trade Tracker and authors' estimations. Note: The first of the two vertical lines denotes April 2020, the introduction of the Dual Circulation Strategy by President Xi Jinping. The second line denotes February 2022, the onset of Russia's full-scale invasion of Ukraine.

5.4. All goods sections in volumes

To complement the value-based analysis, Table 6 presents estimation results for all goods sections in terms of trade volumes²⁹, and Figure 8 illustrates the monthly difference-in-difference estimates respectively. China has decreased its imports of mineral products and base metals and articles thereof from countries in the West-leaning bloc also when looking at trade volumes instead of dollar values. An average West-leaning country's share of imported volumes to China has declined around one percentage point annually since 2023 for base metals and products thereof and 0.3 percentage points for mineral products, respectively.

While the share of imports from the West-leaning countries declined in terms of the value of wood and pulp after 2020, there is no statistically significant effect on import volumes. This suggests that the decrease in value is primarily due to falling prices, rather than a reduction in the actual flow of goods. The average price per unit of wood and pulp that China imported from the West-leaning countries declined relative to imports from East-leaning countries.

We observe a clear increase in import volumes from the West-leaning bloc of articles of stone, plaster and cement starting from 2020, even if the effect on import values is statistically significant only for one year. This suggests that China imported these articles more from the West-leaning bloc but with a lower unit cost.

Table 6. Estimation results with annual dummies and west-leaning interactions. All goods sections in volumes.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12) optical,	(13)	(14)
												photograph		
												ic,		
							articles of	pearls,	base			measuring,		
							stone,	stones,		machinery,		surgical	arms and	
	food,	mineral		plastic and	textiles,	wood and	plaster,	precious	articles	electrical	vehicles	-	ammunitio	misc. and
	beverages	products	chemicals	rubber	footwear	pulp	cement	metals	thereof	equipment			n	arts
VARIABLES	sec1 4	sec5	sec6	sec7	sec81112	sec910	sec13	sec14	sec15	sec16	sec17	sec18	sec19	sec2021
	*****										*****			
_2018_west	-0.200	-0.028	0.215**	0.118	0.240**	-0.056	-0.032	-0.138	0.303**	-0.013	-0.017	-0.007	3.961	0.014
	(0.166)	(0.100)	(0.089)	(0.078)	(0.118)	(0.088)	(0.175)	(0.469)	(0.146)	(0.179)	(0.266)	(0.182)	(14.044)	(0.123)
_2020_west	0.269	0.039	-0.088	-0.127	0.085	-0.008	1.008***	-2.155***	-0.269*	0.009	-0.069	0.033	-2.020	-0.090
	(0.166)	(0.099)	(0.089)	(0.078)	(0.118)	(0.089)	(0.174)	(0.469)	(0.147)	(0.180)	(0.268)	(0.184)	(7.875)	(0.125)
_2021_west	0.414**	-0.146	-0.130	-0.059	0.025	-0.040	0.329*	-0.683	-0.343**	-0.364**	0.054	-0.022	-3.873	-0.063
	(0.167)	(0.099)	(0.090)	(0.078)	(0.118)	(0.089)	(0.173)	(0.470)	(0.145)	(0.180)	(0.264)	(0.184)	(8.159)	(0.123)
_2022_west	0.309*	-0.074	-0.204**	-0.063	0.167	0.010	0.799***	-0.447	-0.752***	-0.038	-0.176	-0.043	-8.946	-0.155
	(0.167)	(0.099)	(0.090)	(0.079)	(0.119)	(0.090)	(0.174)	(0.468)	(0.145)	(0.180)	(0.266)	(0.184)	(8.723)	(0.126)
_2023_west	-0.184	-0.346***	-0.270***	-0.022	0.030	-0.092	0.681***	-0.534	-1.092***	-0.075	-0.078	-0.113	2.077	-0.328***
	(0.169)	(0.100)	(0.090)	(0.078)	(0.119)	(0.090)	(0.174)	(0.473)	(0.145)	(0.181)	(0.266)	(0.184)	(8.798)	(0.125)
2024_west	-0.041	-0.319***	-0.334***	-0.111	-0.107	-0.104	0.865***	-0.733	-1.170***	-0.072	-0.122	-0.020	-2.066	-0.347***
	(0.171)	(0.101)	(0.090)	(0.079)	(0.121)	(0.091)	(0.176)	(0.480)	(0.147)	(0.183)	(0.267)	(0.184)	(8.362)	(0.126)
_2025_west	-0.039	-0.243**	-0.621***	-0.985***	-0.452***	-0.350***	0.158	0.777	-1.128***	-1.175***	-1.404***	-0.953***	-7.761	-1.310***
	(0.206)	(0.122)	(0.108)	(0.094)	(0.149)	(0.112)	(0.211)	(0.580)	(0.178)	(0.223)	(0.322)	(0.225)	(10.672)	(0.152)
Constant	0.974***	1.131***	1.112***	1.168***	1.056***	1.083***	1.469***	1.497***	1.022***	1.053***	1.543***	1.381***	8.127***	1.371***
	(0.058)	(0.035)	(0.032)	(0.027)	(0.041)	(0.031)	(0.060)	(0.163)	(0.051)	(0.063)	(0.091)	(0.064)	(1.347)	(0.043)
Observations	9,394	8,000	8,064	7,774	8,653	8,264	6,191	6,003	8,675	8,581	5,790	6,596	1,049	6,527
R-squared	0.008	0.019	0.028	0.056	0.016	0.011	0.029	0.008	0.027	0.010	0.012	0.012	0.009	0.041
Number of country_id	120	115	119	120	120	118	117	112	120	120	115	117	40	118

Standard errors in parenthese
*** n<0.01. ** n<0.05. * n<0.1

Source: Global Trade Tracker and authors' estimations.

²⁹ Sections 1, 2,3, and 4 are grouped together as "food and beverages".

sections 1-4, volume section5, volume section 6, volume - 95% confidence interval sections 8, 11, 12, volume sections 9, 10, volume section 7, volume Ŧ section 13, volume section 14, volume section 15, volume section 16, volume section 17, volume section 18, volume sections 20, 21, volume

Figure 8. Monthly difference-in-differences parameter estimates in different trade categories and their 95 % confidence intervals. All goods sections in volumes.

Source: Global Tracker and authors' estimations. Note: The first of the two vertical lines denotes April 2020, the introduction of the Dual Circulation Strategy by President Xi Jinping. The second line denotes February 2022, the onset of Russia's full-scale invasion of Ukraine.

5.5. Discussion of results

Starting in 2021, China reduced imports from the West-leaning countries relative to like-minded countries in the East-leaning bloc, with the trend intensifying after Russia's invasion of Ukraine in 2022. However, this shift is concentrated in certain sectors. The most pronounced declines are observed in base metals—particularly iron and steel—where the West-leaning bloc countries' average

import share was over 3 percentage points lower in 2025 compared to East-leaning countries. For mineral fuels and oils, the West-leaning countries' shares have also decreased, with a difference of up to 1.5 percentage points. Given that state-owned enterprises are the key drivers of the Dual Circulation Strategy's implementation, it is not a surprise that industries that are dominated by SOEs, such as metals and minerals, drive the results. Indeed, the Chinese leadership can implement its desired economic policies efficiently by giving directives to SOEs. On the contrary, influencing private sector enterprises is less straightforward, relying on persuasion rather than orders.

The share of imports from West-leaning bloc countries in sanctioned categories shows some decline only in electronics related to wireless communications from 2023, but the overall negative shift in trade shares is mainly driven by non-sanctioned goods. This finding may reflect China's growing difficulty in accessing certain high-tech products. The United States first imposed advanced technology export restrictions on China under the Biden administration in 2022, and these measures have since expanded to cover a broader range of technologies and include U.S. allies.³⁰ Our findings, however, do not suggest that China's access to high-technology imports from the West-leaning bloc has been broadly restricted, as the bloc's overall share in these technology intensive has not declined.

Volume data confirm reduced imports from the West-leaning bloc in mineral products and base metals since 2023. However, for some goods like wood and pulp, value declines are due to price drops rather than volume reductions. These patterns coincide with China's economic coercion measures against Australia—a West-leaning country. In 2020, after Australia supported an inquiry into the origins of COVID-19, China curtailed imports of Australian coal and agricultural products. Coal falls under the mineral products and base metals category. China began lifting these bans in 2023.³¹

It is possible that China has reduced its imports from the West-leaning bloc simply because the share of the bloc in global trade within these specific product categories has declined overall. In this case, the reduction in imports would be driven more by supply-side factors rather than an active decision by China. For this reason, we examine the world export market shares of both the West-leaning and East-leaning countries across selected product groups and their respective developments during our time span. Figure 9 also includes the combined market share of China and Hong Kong, which may to some extent be interpreted as reflecting China's growing domestic production.

31 https://www.reuters.com/markets/commodities/how-strained-china-australia-relations-hit-trade-coal-barley-beef-wine-2023-01-06/

³⁰ https://www.csis.org/analysis/limits-chip-export-controls-meeting-china-challenge

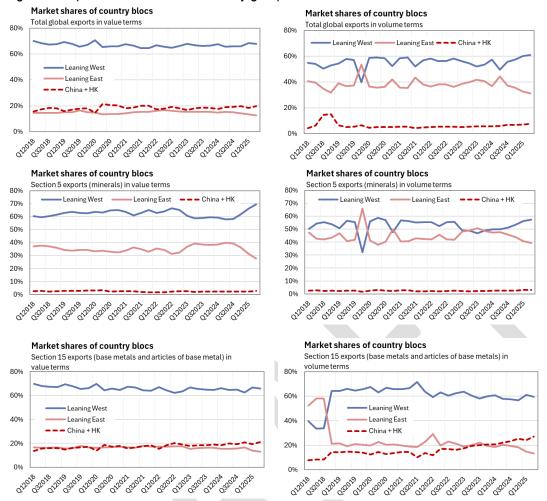


Figure 9. Export market shares of country groups 2018-2025 in values and volumes.

Source: Global Trade Tracker and authors' calculations.

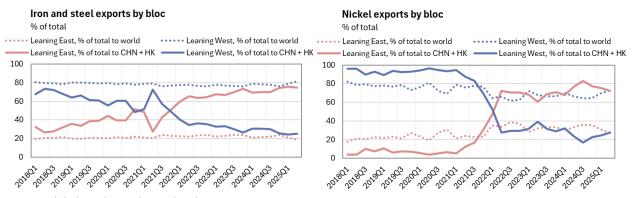
An examination of market share developments reveals that China's reduced imports from the West-leaning bloc cannot be attributed to a concurrent decline in the bloc's overall share of global exports. In fact, the West-leaning bloc's market share in total global exports has remained stable in both value and volume terms since 2020, with signs of growth emerging after 2024. Similarly, the market share of East-leaning countries remained steady until 2024, after which a slight decline is observed.

In the case of minerals, the West-leaning bloc's market share decreased somewhat during 2023-2024, while the share of East-leaning countries increased. However, in 2025, the West-leaning bloc regained market share, and the East-leaning countries' share declined. For base metals, the West-leaning bloc's market share remained unchanged in value terms but experienced a slight drop in volume terms toward the end of 2021. The market share of East-leaning countries has shown a modest downward trend in both value and volume terms since 2024. China's own share in global

goods exports has increased over the review period, with particularly notable growth in its export share of base metals. Such shifts underscore China's strategic emphasis on building a more resilient and independent export sector.

Our results showed that China has shifted is import sources for base metals and articles of base metals (Section 15) towards like-minded countries. These results were predominantly driven by iron and steel (subcategory 72) as well as nickel and articles thereof (subcategory 75). A closer examination of the corresponding market shares of the West- and East-leaning blocs for these two subcategories as well as their corresponding shares in China reveals a notable shift that supports our analysis (Figure 10). While the East-leaning bloc's global export market share for iron and steel has remained virtually unchanged at around 20% since 2018, its has become a major supplier to China, now providing around 80% of China's imports of iron and steel. A similar pattern is evident in nickel exports. The East-leaners' global market share hovered around 30% in recent years, yet China imports almost 80% of its nickel needs from this likeminded bloc.

Figure 10. Market shares of exports of iron and steel (subcategory 72) and nickel and articles thereof (subcategory 75) to world and to China.

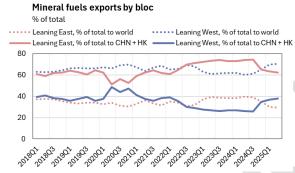


Source: Global Trade Tracker and authors' calculations.

The strong results for China's import realignment for Section 5 goods (mineral products), were mostly driven by the subcategory 27, i.e. mineral fuels. Similarly to base metals, mapping out the West- and East leaners' relative dominance in the global market versus in China exposes an interesting fact (Figure 11). While the East-leaning bloc's global market share for mineral fuels exports has hovered between 30% and 40% in recent years, the bloc's market share in China is significantly higher, at around 60–70%, implying a strong preference by China to import mineral

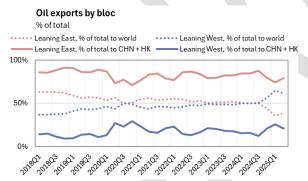
fuels from like-minded countries. Indeed, China has emphasized energy security in its policy priorities in recent years³², which is evident in our results. In fact, China has recently been building its crude oil inventories³³, despite the fact that global oil prices have not been considered favourable for such efforts. With this in mind, we dive deeper into subcategory 27 and study petroleum oils (HS code 270900; petroleum oils and oils obtained from bituminous minerals, crude). As shown in Figure 12, China portrays a strong preference for importing crude oil from likeminded countries.

Figure 11. Market shares of exports of mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes (subcategory 27) to world and to China.



Source: Global Trade Tracker and authors' calculations.

Figure 12. Market shares of exports of petroleum oils and oils obtained from bituminous minerals, crude (HS code 270900) to world and to China.



Source: Global Trade Tracker and authors' calculations.

came into effect in January 2025, aimed at strengthening national energy security (https://www.carbon-brief.org/china-briefing-9-january-2025-2025-government-priorities-chinas-first-energy-law-what-to-watch-in-year-ahead/).

³² China has been developing a new energy system with a strong emphasis on security since the 18th CPC National Congress in 2012. In his 2024 remarks, President Xi stated that "energy security bears heavily on overall economic and social development." (https://english.www.gov.cn/news/202403/02/content_WS65e14600c6d0868f4e8e47ec.html) This priority has now been codified in China's first energy law, which

³³ See e.g., https://www.wsj.com/business/energy-oil/china-is-filling-up-its-oil-reserves-fast-444b8edb

Despite a clear policy objective to reduce dependence on the West-leaning countries, practical constraints have likely limited both the scope and speed of China's import realignment. Many goods imported from West-leaning countries – such as advanced machinery, high-tech components, and specialized materials – are not easily replaced by suppliers from other regions. Furthermore, disentangling from established Western suppliers requires significant time and investment, which slows the pace of realignment even when policy incentives are present. Policy-driven shifts tend to be feasible only where alternative suppliers are readily available or where domestic production can be increased without major trade-offs. As a result, the observed decline in West-leaning bloc's import shares is concentrated in a few sectors – mostly raw materials – and the aggregate economic impact remains modest. However, this may simply reflect the early stages of a longer-term transition. Indeed, industries dominated by SOEs are the frontrunners of the shift, while private sector dominated industries will be slower to adjust due to weaker policy enforcement mechanisms. Policy intentions often take time to translate into measurable trade outcomes, as investments in domestic capacity, the development of new supplier relationships, and the restructuring of supply chains are gradual processes.

5.6 Robustness analysis

To ensure the reliability of our findings, we conduct robustness checks that address potential sources of bias and alternative geopolitical groupings.

Our first robustness check involves excluding Russia from the sample (Table 7). Following its full-scale invasion of Ukraine in 2022 and the subsequent imposition of extensive sanctions and export controls by Western countries, Russia's share of raw material imports to China has increased markedly. As this shift may disproportionately influence the results, we exclude Russia from the sample of countries and redo our main estimations with annual dummy interactions looking separately at total exports, base metal exports, and mineral exports. Excluding Russia does not alter our results: China appears to have realigned its imports away from West-leaners regardless, and the findings remain robust for both base metals and minerals.

Table 7. Estimation results with annual dummies and west-leaner interactions excluding Russia from the sample. Good sections in values.

	(1)	(2)	(3)
	excluding	excluding	excluding
	Russia	Russia	Russia
VARIABLES	total	base metals	minerals
_2018_west	0.065**	0.133	-0.049
	(0.033)	(0.111)	(0.114)
_2020_west	-0.027	-0.156	0.206*
	(0.033)	(0.112)	(0.113)
_2021_west	-0.109***	-0.155	0.016
	(0.033)	(0.111)	(0.114)
_2022_west	-0.196***	-0.627***	-0.092
	(0.033)	(0.111)	(0.113)
_2023_west	-0.230***	-0.623***	-0.294**
	(0.033)	(0.111)	(0.115)
_2024_west	-0.166***	-0.615***	-0.385***
	(0.034)	(0.113)	(0.116)
_2025_west	-0.013	-1.151***	-0.995***
	(0.039)	(0.147)	(0.144)
Constant	0.866***	0.991***	0.959***
	(0.012)	(0.039)	(0.040)
Observations	10,162	8,557	7,938
R-squared	0.021	0.020	0.020
Number of country_id	120	119	114

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Our second robustness check revisits our geopolitical classification. Instead of the binary division used in the baseline analysis, we adopt a three-bloc framework, again based on Herscovitch (2025). In the baseline, the West-leaning bloc included all countries in groups 1-3 (see Chapter 4.1.). In this robustness check, the West-leaning bloc comprises only countries in groups 1 and 2, while countries in group 3 form a new category of neutral countries. East-leaning countries (the control group) remain those in groups 4 and 5 (see country listing in the Appendix). This finer categorization allows us to capture more nuanced geopolitical alignments and test whether the binary grouping oversimplifies China's strategic behavior toward import countries. Table 8 presents the results for total exports, exports of base metals, and exports of minerals.

The results appear stronger for the West-leaning bloc countries than for the neutral group, reinforcing our main result that China has realigned its imports away from countries that are less politically aligned with it. For base metals, we observe a negative and statistically significant impact on West-leaning countries beginning in 2020. In contrast, the effect for the neutral group only becomes statistically significant starting in 2022. The timing difference suggests that China's strategic shift in import sourcing began earlier and more decisively with the Western-aligned countries.

Table 8. Estimation results with annual dummies and interactions with west-leaning group and neutral group interactions. Good sections in values.

ווונטומטנוטווס.	Good Sections	III values	<u>)</u>
	(1)	(2)	(3)
	three blocs	three blocs	three blocs
VARIABLES	total	base metals	minerals
west_2018	0.081**	0.164	-0.100
	(0.040)	(0.127)	(0.137)
west_2020	-0.044	-0.267**	0.378***
	(0.040)	(0.129)	(0.137)
west_2021	-0.135***	-0.378***	0.138
	(0.040)	(0.128)	(0.137)
west_2022	-0.210***	-0.695***	-0.061
	(0.040)	(0.128)	(0.137)
west_2023	-0.293***	-0.759***	-0.343**
	(0.040)	(0.128)	(0.138)
west_2024	-0.204***	-0.737***	-0.516***
	(0.041)	(0.130)	(0.139)
west_2025	-0.037	-1.234***	-0.899***
	(0.047)	(0.168)	(0.172)
neutral_2018	0.045	0.087	-0.002
	(0.048)	(0.153)	(0.154)
neutral_2020	0.023	-0.017	0.101
	(0.048)	(0.152)	(0.153)
neutral_2021	-0.055	0.148	-0.054
	(0.048)	(0.150)	(0.153)
neutral_2022	-0.176***	-0.516***	-0.186
	(0.048)	(0.151)	(0.153)
neutral_2023	-0.214***	-0.563***	-0.370**
	(0.048)	(0.151)	(0.153)
neutral_2024	-0.105**	-0.569***	-0.452***
	(0.049)	(0.152)	(0.154)
neutral_2025	0.115**	-1.075***	-1.175***
	(0.056)	(0.200)	(0.194)
Constant	0.891***	1.001***	1.095***
	(0.012)	(0.039)	(0.041)
Observations	10,249	8,639	8,020
R-squared	0.021	0.023	0.022
Number of country	_id 121	120	115

As a third robustness check, we regroup countries based on their response to Russia's 2022 invasion of Ukraine – specifically, whether they imposed sanctions. This classification reflects a concrete policy stance and may better capture countries' economic and political alignment than the more ambiguous positioning on the Taiwan issue. The groupings partially overlap: of the 68 Eastleaning countries in our baseline analysis, only 5 belong to the group that imposed sanctions on Russia. Likewise, among the 53 West-leaning bloc countries in our baseline analysis, 35 have imposed sanctions. In total, 40 countries in our sample imposed sanctions on Russia, while 80 did not (list of countries in Appendix, Table A1). By comparing results across sanctioning and non-sanctioning countries, we assess whether the observed patterns are robust to this alternative grouping criterion. Table 9 presents the results again for the total exports, exports of base metals and exports of minerals.

The results indicate that China has realigned its imports away from Western countries – even when these are defined as those that imposed sanctions on Russia – and the magnitude of the coefficients is broadly consistent with our results in the baseline analysis.

^{***} p<0.01, ** p<0.05, * p<0.1

Table 9. Estimation results with annual dummies and interactions with group of countries sanctioning Russia after 2022. Good sections in values.

<u>ailei 2022. Guuu se</u>			(2)
	(1)	(2)	(3)
	sanction	sanction	sanction
	groupings	groupings	groupings
VARIABLES	total	base metals	minerals
sanctions 2018	0.065*	0.181	-0.087
54116416115_2525	(0.036)	(0.114)	(0.119)
sanctions_2020	-0.033	-0.376***	0.285**
	(0.036)	(0.115)	(0.119)
sanctions_2021	-0.120***	-0.563***	0.092
	(0.036)	(0.113)	(0.119)
sanctions_2022	-0.214***	-0.679***	-0.172
	(0.036)	(0.114)	(0.119)
sanctions_2023	-0.282***	-0.711***	-0.314***
	(0.037)	(0.114)	(0.120)
sanctions_2024	-0.202***	-0.670***	-0.448***
	(0.037)	(0.115)	(0.120)
sanctions_2025	-0.216***	-1.135***	-1.037***
	(0.053)	(0.171)	(0.176)
Constant	0.890***	0.587***	0.757***
	(0.021)	(0.084)	(0.083)
Observations	10,249	8,639	8,020
R-squared	0.021	0.020	0.020
Number of country_id	121	120	115
ivalliber of country_la	121	120	113

The fourth robustness check examines export values by utilizing the logarithmic transformation of export values, rather than focusing on the export share of each source country. We reestimate the models for total exports, as well as for the categories of base metals and minerals. The results in table 10 confirm our main findings. The estimated coefficients remain consistent with those obtained from the export share analysis, indicating that the observed decline in imports from West-leaning countries is not sensitive to the choice of measurement.

The final robustness check employs mirror statistics by analysing Chinese import data, rather than relying on the exporter-reported figures. Specifically, we re-estimate our regressions again for the share of total imports, as well as for imports of base metals and minerals, using Chinese customs statistics. The results presented in Table 11 again corroborate our main findings: the decline in the share of imports from West-leaning countries remains evident when using Chinese import data. The estimated effects are consistent in both direction and magnitude with those obtained from exporter-reported statistics, further reinforcing the robustness of our conclusions regarding China's selective realignment of import sources.

^{***} p<0.01, ** p<0.05, * p<0.1

Table 10. Estimation results with annual dummies and interactions with West-leaners, value of exports in logs.

<u> </u>	(1)	(2)	(3)
		base metals	minerals in
VARIABLES	total in logs	in logs	logs
_2018_west	-0.022	-0.000	-0.063
	(0.067)	(0.120)	(0.145)
_2020_west	0.030	-0.040	0.629***
	(0.067)	(0.121)	(0.144)
_2021_west	-0.097	-0.085	0.131
	(0.067)	(0.120)	(0.145)
_2022_west	-0.289***	-0.689***	-0.502***
	(0.067)	(0.119)	(0.144)
_2023_west	-0.338***	-0.821***	-0.906***
	(0.068)	(0.120)	(0.146)
_2024_west	-0.306***	-1.004***	-0.957***
	(0.069)	(0.122)	(0.147)
_2025_west	-0.324***	-0.996***	-0.671***
	(0.080)	(0.159)	(0.184)
Constant	18.245***	15.030***	16.024***
	(0.024)	(0.042)	(0.051)
Observations	10,197	8,729	8,109
R-squared	0.022	0.039	0.030
Number of country_id	122	121	116
 			_

Table 11. Estimation results with annual dummies and interactions with West-leaners, Chinese imports in values.

	(1)
	total imports
VARIABLES	to China
_2018_west	0.014
	(0.019)
_2020_west	0.053***
	(0.019)
_2021_west	0.006
	(0.019)
_2022_west	-0.076***
	(0.019)
_2023_west	-0.102***
	(0.019)
_2024_west	-0.094***
	(0.019)
_2025_west	-0.132***
	(0.021)
Constant	0.682***
	(0.007)
Observations	11,237
Number of country id	121
R-squared	0.017
Standard orrors in parent	hasas

^{***} p<0.01, ** p<0.05, * p<0.1

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

6 Conclusions

This study set out to examine whether China's import patterns have shifted away from West-leaning countries in the context of rising geoeconomic tensions and supply chain fragmentation. Using detailed trade data for both value and volume terms and difference-in-differences approach, we find that the most pronounced decline in West-leaning countries' import shares is related to raw materials – particularly base metals and minerals. For iron and steel, the West-leaning countries average import share in value terms was over 3 percentage points lower in 2025, and for mineral fuels and oils, up to 1.5 percentage points lower. In volume terms, average import shares fell by about one percentage point and by 0.3 percentage points, respectively. For most other product categories, including sanctioned and economically critical goods, the changes in import shares are either modest or statistically insignificant.

Our findings suggest that, despite heightened geopolitical tensions and policy rhetoric emphasizing self-reliance and friend-shoring, China's realignment of its trade flows away from the West-leaning has so far been selective. However, these current shifts may represent only the early stages of a broader strategic transition, as domestic capacity building and supplier diversification require time. Future research should continue to monitor these trends, particularly as China's industrial policy evolves and global economic and geopolitical conditions continue to shift. Further analysis could also explore the long-term effects of these adjustments on global trade patterns and economic resilience.

References

- Alfaro, L. and D. Chor (2023). "Global Supply Chains: The Looming "Great Reallocation". NBER Working Paper Series No. 31661, https://www.nber.org/papers/w31661.
- Bosone, C. and G. Stamato (2024). Beyond borders: how geopolitics is reshaping trade. ECB Working Paper Series 2960/July 2024.
- Cheung, S. (2025). "Beijing Learning Lessons From Russian Response to Financial War". *China Brief* 25 (14): 24–31.
- Cigna, S., P. Meinen, P. Schulte, and N. Steinhoff (2020). "The impact of US tariffs against China on US imports: evidence for trade diversion?". ECB Working Paper Series No 2503/December 2020.
- Davis, C. L. and R. Ma (2025). "Sanction Spillover and Trade Diversification". Unpublished manuscript. Available at https://ruofan-ma.github.io/paper/Sanction.pdf.
- Du, Y., J. Ju, C.D. Ramirez, and X. Yao (2017). "Bilateral Trade and Shocks in Political Relations: Evidence from China and Some of Its Major Trading Partners, 1990–2013." *Journal of International Economics*, 108: 211–225.
- Fuchs, A. and N.-H. Klann (2013). "Paying a Visit: The Dalai Lama Effect on International Trade." *Journal of International Economics*, 91: 164–177.
- Gopinath, G., P.-O. Gourinchas, A. F. Presbitero, and P. Topalova (2024). "Changing Global Linkages: A New Cold War?" IMF Working Paper WP/24/76, https://doi.org/10.5089/9798400272745.001
- Herscovitch, B. (2025). "Five One-Chinas: The contest to define Taiwan." Lowy Institute, January 2025. Available at http://lowy-institute.github.io/publications/2025/HERSCOVITCH-Five-One-Chinas-Contest-to-define-Taiwan.pdf.
- Hinz, J. and E. Monastyrenko (2019). "Bearing the cost of politics: Consumer prices and welfare in Russia". Kiel Working Papers 2119, Kiel Institute for the World Economy (IfW).
- Jakubik, A. and M. Ruta. (2023). "Trading with Friends in Uncertain Times." IMF Working Paper, WP/23/124.
- Kerola E., T. McCully, and R. Nuutilainen (2024). "Trade with Chinese characteristics economics versus politics." BOFIT Discussion Papers, 8/2024.
- Nitsch, V. (2007). "State Visits and International Trade". World Economy, 30(12): 1797–1816.
- Pierce, J. R. and D. Yu (2023). "Assessing the Extent of Trade Fragmentation," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, November 03, 2023, https://doi.org/10.17016/2380-7172.3387.
- Qiu, H., D. Xia, and J. Yetman (2024). Deconstructing global trade: the role of geopolitical alignment. BIS Quarterly Review September 2024.
- Rodarte, I. (2023). "Trade and Development Chart: The Rise of China." World Bank Blogs 12.4.2023, https://blogs.worldbank.org/en/trade/trade-and-development-chart-rise-china
- Rose, A.K. (2007). "The Foreign Service and Foreign Trade: Embassies as Export Promotion." *World Economy*, 30(1): 22–38.

- Simola, H. (2025). "Russia's ever-increasing economic dependence on China". BOFIT Policy Brief, 10/2025.
- Wang, H. and B. Zakheim. (2025). "China's Lessons from the Russia-Ukraine War." Rand Research Report 22.5.2025, https://www.rand.org/pubs/research_reports/RRA3141-4.htmlZhou,
- W., H. Jiang, and Z. Chen. (2023). "Trade vs. Security: Recent Developments of Global Trade Rules and China's Policy and Regulatory Responses from Defensive to Proactive." World Trade Review, 22: 193–211.



Appendix

Table A1. Countries in the sample

Angola				1				
Angoin		C	DUIC	Category by		C	DUC	Category by
2 Albania West leaner ves 3 61 kedand West leaner ves 3 62 kszel East leaner ves 3 62 kszel East leaner ves 3 63 kszel East leaner ves 3 63 kszel East leaner ves 2 64 Jordan West leaner ves 2 65 kszakhstan East leaner ves 2 65 kszakhstan East leaner ves 2 65 kszakhstan East leaner ves 2 68 kszakhstan East leaner ves 2 71 kszakhstan East		•				-		
2 Abania West leaner ves 3 63 Israel East leaner no 4	1 Angola	<u> </u>			61 Iceland V	<u> </u>		
3 Andorra West leaner vest learer no 2 2 4 Argentina West leaner no 3 2 6 4 Jordan West leaner vest sammen 3 2 6 4 Jordan West leaner vest sammen 3 2 6 4 Jordan West leaner vest sammen 3 2 6 5 Japan West leaner vest sammen 5 6 Aragena and Barbuda East leaner no 5 6 Kazakhstan East leaner no 5 6 Kazakhstan East leaner no 5 7 Kenya East leaner no 5 7 Kenya East leaner no 5 9 Acerbaljan East leaner no 5 9 Gambodia East leaner no 6 9 Gambodia East leaner no 6 9 Gambodia East leaner no 6 9 Gambodia East leaner no 7 9 Modia 2 9 Gambodia East leaner no 7 9 Modia 2 9 Gambodia East leaner no 6 9 Gambodia East leaner no 6 9 Gambodia East leaner no 7 9 Modia 8 9 Gambodia <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td>	-						•	
A Argentina								
S. Armenia West leaner no 3 6 5 Japan West leaner no 5 6 Antigua and Barbuda East leaner no 5 6 6 Kazakhstan East leaner no 5 7 Kenya East leaner no 6 7 7 Kenya East Eaner no 6 8 Kenya East Eaner no			-		•			
6 Antique and Barbuda East leaner No 4 7 Australia West leaner Ves 2 67 Kernya East leaner No 5 5 8 Austria West leaner Ves 2 67 Kernya East leaner No 5 5 68 Kyrgzstan East leaner No 5 5 68 Kyrgzstan East leaner No 5 5 70 South Korea West leaner Ves 2 70 South Korea West leaner Ves 2 71 Kuwait East leaner No 4 71 Kuwait East leaner No 4 73 Lithuania West leaner Ves 2 73 South Korea West leaner Ves 2 73 South Korea West leaner Ves 4 73 Lithuania West leaner Ves 4 73 Lithuania West leaner Ves 4 74 Liuxembourg West leaner Ves 4 74 Liuxembourg West leaner Ves 4 75 Larvia East leaner No 5 75 Kindha East leaner No 5 8 Kindha Kin	-							
7 Australia West leaner yes 2 67 Kerya East leaner no 5 9 Azerbaijan East leaner no 5 69 Cambodia East leaner no 5 11 Benjin East leaner no 5 70 South Korea West leaner yes 2 11 Benjin East leaner no 5 71 Kuwait East leaner no 4 12 Burkinia Faso East leaner no 5 71 Kuwait East leaner no 4 13 Bangladesh East leaner no 4 73 Lithuania East leaner no 4 73 Lithuania East leaner no 4 75 Listuria 8 Listura 9 4 74 Lucembourg West leaner yes 2 75 Morocco East leaner no 5 77 Moldova East leaner no 5 78 Morocco East leaner no 5 79 Mexico East leaner no 5 79 Mexico East leaner no 5					•		•	
8 Australa West leaner yes 2 68 kyrgyzstan East leaner no 5 10 Belgium West leaner yes 2 70 South Korea West leaner yes 2 11 Benin East leaner no 5 71 Kuwalt East leaner no 4 12 Burkins Faso East leaner no 5 72 Sr Lanka East leaner no 4 13 Bangladesh East leaner no 4 73 Lithuania West leaner yes 2 15 Bahrain East leaner no 4 74 Luxembourg West leaner yes 2 16 Bosnia and Herzegovina West leaner no 5 75 Latvia East leaner no 5 18 Belize West leaner no 5 77 Moldova East leaner no 5 19 Bolivia East leaner no 2 2 82 Mayamar West leaner yes 2 22 Brunei West leaner no	-							
9 Ascrbaijan	8 Austria	West leaner		2	•	ast leaner	no	5
11 Benin	9 Azerbaijan	East leaner		5		ast leaner	no	5
12 Burkina Faso			yes	2			yes	2
13 Bangladesh	11 Benin	East leaner	no	5	71 Kuwait E	ast leaner	no	4
14 Bulgaria	12 Burkina Faso	East leaner	no	5	72 Sri Lanka E	ast leaner	no	4
15 Bahrain	13 Bangladesh	East leaner	no	4	73 Lithuania V	Vest leaner	yes	3
16 Bosnia and Herzegovina West leaner no 3 76 Morocco East leaner no 5 17 Belarus East leaner no 5 17 Belarus East leaner no 5 18 Belize West leaner no 1 18 Belize West leaner no 5 19 Bolivia East leaner no 5 19 Bolivia East leaner no 4 20 Brazil East leaner no 2 2 28 Il Malata West leaner ves 2 22 Brunel West leaner no 5 28 Morambique East leaner no 5 23 Botswana East leaner no 5 28 Morambique East leaner no 5 25 Switzerland West leaner ves 2 28 Maurittus East leaner no 5 25 Switzerland West leaner ves 2 28 Maurittus East leaner no 5 27 Côte d'Ivoire East leaner no 5 28 Morambique East leaner no 5 28 Morambique East leaner no 5 27 Côte d'Ivoire East leaner no 5 88 Nicaragua East leaner no 5 29 Democratic Republic of the Congcfast leaner no 5 88 Nicaragua East leaner no 5 29 Democratic Republic of the Congcfast leaner no 5 89 Netherlands West leaner ves 2 21 Costa Rica East leaner no 5 29 Democratic Republic of the Congcfast leaner no 5 29 Democratic Republic of the Congcfast leaner no 5 29 Democratic Republic of the Congcfast leaner no 5 29 Democratic Republic of the Congcfast leaner no 5 29 Democratic Republic of the Congcfast leaner no 5 29 Democratic Republic of the Congcfast leaner no 5 29 Democratic Republic of the Congcfast leaner no 5 29 Democratic Republic East leaner no 6 20 Democratic Republic East leaner no 6 20 Democratic Republic E	14 Bulgaria	East leaner	yes	4	74 Luxembourg V	Vest leaner	yes	2
17 Belarus	15 Bahrain	East leaner	no	4	75 Latvia E	ast leaner	yes	4
18 Belize West leaner no	16 Bosnia and Herzegovina	West leaner	no	3	76 Morocco E	ast leaner	no	5
19 Bolivia East leaner no 5 79 Mexico East leaner no 4	17 Belarus	East leaner	no	5	77 Moldova E	ast leaner	no	5
20 Brazil	18 Belize	West leaner	no	1	78 Madagascar E	ast leaner	no	5
21 Barbados West leaner no 2 81 Malta West leaner no 3 3 22 22 Brunel West leaner no 3 3 32 Myasma East leaner no 5 83 Mozambique East leaner no 5 5 33 Mozambique East leaner no 5 5 34 Mauritius East leaner no 5 5 35 Milaysia West leaner no 5 35 Milaysia West leaner no 5 37 Nigeria East leaner no 5 38 Nicaragua East leaner no 5 38 Nicaragua East leaner no 5 38 Nicaragua East leaner no 5 39 Netherlands West leaner ves 2 30 Congo East leaner no 5 90 Norway West leaner ves 2 31 Colombia East leaner no 5 91 New Zealand West leaner ves 2 32 Costa Rica East leaner no 4 92 Pakistan East leaner no 5 33 Cyprus West leaner ves 2 33 Panama East leaner no 4 34 Czechia West leaner ves 3 94 Peru East leaner no 4 35 Germany West leaner ves 3 95 Philippines West leaner ves 3 37 Dominican Republic East leaner no 5 99 Qatar West leaner ves 3 37 Dominican Republic East leaner no 5 99 Qatar West leaner ves 3 37 Dominican Republic East leaner no 5 99 Qatar West leaner ves 3 40 Peru East leaner no 5 41 Spain West leaner ves 3 100 Russia East leaner no 5 100 Russia East le	19 Bolivia	East leaner	no	5	79 Mexico E	ast leaner	no	4
22 Brunei West leaner no 2 82 Myanmar West leaner no 5 23 Botswana East leaner no 5 83 Mozambique East leaner no 5 24 Canada West leaner yes 2 84 Mauritius East leaner no 5 25 Switzerland West leaner yes 2 85 Malaysia West leaner no 3 26 Chile East leaner no 5 87 Nigeria East leaner no 5 27 Cote d'ivoire East leaner no 5 87 Nigeria East leaner no 5 28 Cameroon East leaner no 5 88 Nicaragua East leaner no 5 29 Democratic Republic of the Congresat leaner no 5 90 Norway West leaner yes 2 31 Coptra East leaner no 4 92 Pakistan East leaner no 5 31 Cyprus West leaner yes 2 93	20 Brazil	East leaner	no	4	80 North Macedonia V	Vest leaner	no	3
23 Botswana East leaner no 5 83 Mozambique East leaner no 5 24 Canada West leaner yes 2 84 Mauritius East leaner no 5 25 Switzerland West leaner no 4 86 Namibia East leaner no 5 27 Côte d'Ivoire East leaner no 5 87 Nigeria East leaner no 5 29 Democratic Republic of the Congreast leaner no 5 88 Nicaragua East leaner no 5 30 Congo East leaner no 5 99 Norway West leaner yes 2 31 Colombia East leaner no 5 99 Norway West leaner yes 2 32 Corgo East leaner no 4 92 Pakistan East leaner yes 2 31 Colombia West leaner yes 2 39 Panama East leaner no 5 34 Czechia West leaner yes 3 95	21 Barbados	West leaner	no	2	81 Malta V	Vest leaner	yes	2
24 Canada West leaner yes 2 84 Mauritius East leaner no 5 25 Switzerland West leaner yes 2 85 Malaysia West leaner no 3 26 Chile East leaner no 4 86 Namibia East leaner no 5 27 Côte d'Ivoire East leaner no 5 87 Nigeria East leaner no 5 28 Cameroon East leaner no 5 88 Nicaragua East leaner no 5 30 Congo East leaner no 5 89 Netherlands West leaner yes 2 31 Colombia East leaner no 4 92 Pakistan East leaner yes 2 32 Costa Rica East leaner yes 2 93 Panama East leaner no 4 34 Czechia West leaner yes 3 95 Phillippines West leaner yes 3 36 Demmark West leaner yes 2	22 Brunei	West leaner	no	2	82 Myanmar V	Vest leaner	no	3
25 Switzerland West leaner yes 2 85 Malaysia West leaner no 3 26 Chile East leaner no 4 86 Namibia East leaner no 5 27 Côte d'ivoire East leaner no 5 87 Nigeria East leaner no 5 29 Demoratic Republic of the Congcast leaner no 5 88 Nicaragua East leaner no 5 30 Congo East leaner no 5 90 Norway West leaner yes 2 31 Colombia East leaner no 5 91 New Zealand West leaner yes 2 32 Costa Rica East leaner no 4 92 Pakistan East leaner no 5 31 Colombia West leaner yes 2 93 Panama East leaner no 6 32 Cycus West leaner yes 2 93 Panama East leaner no 2 34 Czechia West leaner yes 2 96	23 Botswana	East leaner	no	5	83 Mozambique E	ast leaner	no	5
26 Chile East leaner no 4 86 Namibia East leaner no 5 27 Cotte d'Ivoire East leaner no 5 87 Nigeria East leaner no 5 28 Cameroon East leaner no 5 88 Nicaragua East leaner no 5 30 Congo East leaner no 5 90 Norway West leaner yes 2 31 Colombia East leaner no 5 91 New Zealand West leaner yes 2 31 Colombia East leaner no 4 92 Pakistan East leaner no 5 32 Cyprus West leaner yes 2 93 Panama East leaner no 4 34 Czechia West leaner yes 3 95 Philippines West leaner no 2 36 Demmark West leaner yes 2 96 Poland West leaner yes 3 37 Dominican Republic East leaner no 5 <t< td=""><td>24 Canada</td><td>West leaner</td><td>yes</td><td>2</td><td>84 Mauritius E</td><td>ast leaner</td><td>no</td><td>5</td></t<>	24 Canada	West leaner	yes	2	84 Mauritius E	ast leaner	no	5
27 Côte d'Ivoire East leaner no 5 87 Nigeria East leaner no 5 28 Cameroon East leaner no 5 88 Nicaragua East leaner no 5 29 Democratic Republic of the CongEast leaner no 5 89 Norway West leaner yes 2 30 Congo East leaner no 5 90 Norway West leaner yes 2 31 Colombia East leaner no 4 92 Pakistan East leaner no 4 32 Cyprus West leaner yes 2 93 Panama East leaner no 4 34 Czechia West leaner yes 3 95 Philippines West leaner no 2 36 Denmark West leaner yes 2 96 Poland West leaner yes 3 37 Dominican Republic East leaner no 5 98 Paraguay West leaner yes 4 38 Algeria East leaner no 5	25 Switzerland	West leaner	yes	2	85 Malaysia V	Vest leaner	no	3
28 Cameroon East leaner no 5 88 Nicaragua East leaner no 5 29 Democratic Republic of the CongrEast leaner no 5 89 Netherlands West leaner yes 2 30 Congo East leaner no 5 90 Norway West leaner yes 2 31 Colombia East leaner no 4 92 Pakistan East leaner no 5 32 Cyprus West leaner yes 2 93 Panama East leaner no 4 34 Czechia West leaner yes 3 94 Peru East leaner no 4 35 Germany West leaner yes 3 95 Philippines West leaner yes 3 36 Denmark West leaner yes 2 96 Poland West leaner yes 3 37 Dominican Republic East leaner no 5 98 Paraguay West leaner yes 4 40 Egypt East leaner no 5 <t< td=""><td>26 Chile</td><td>East leaner</td><td>no</td><td>4</td><td>86 Namibia E</td><td>ast leaner</td><td>no</td><td>5</td></t<>	26 Chile	East leaner	no	4	86 Namibia E	ast leaner	no	5
29 Democratic Republic of the Congc East leaner no 5 89 Netherlands West leaner yes 2 30 Congo East leaner no 5 90 Norway West leaner yes 2 31 Colombia East leaner no 5 91 New Zealand West leaner yes 2 32 Costa Rica East leaner no 4 92 Pakistan East leaner no 4 34 Czechia West leaner yes 2 93 Panama East leaner no 4 35 Germany West leaner yes 2 96 Poland West leaner no 2 36 Denmark West leaner yes 2 96 Poland West leaner yes 3 37 Dominican Republic East leaner no 4 97 Portugal East leaner no 1 38 Algeria East leaner no 5 98 Paraguay West leaner yes 4 40 Egypt East leaner no 5	27 Côte d'Ivoire	East leaner	no	5	87 Nigeria E	ast leaner	no	5
30 Congo East leaner no 5 90 Norway West leaner yes 2 31 Colombia East leaner no 5 91 New Zealand West leaner yes 2 32 Costa Rica East leaner no 4 92 Pakistan East leaner no 5 33 Cyprus West leaner yes 2 93 Panama East leaner no 4 34 Czechia West leaner yes 3 94 Peru East leaner no 4 35 Germany West leaner yes 2 96 Poland West leaner no 2 36 Denmark West leaner yes 2 96 Poland West leaner yes 3 37 Dominican Republic East leaner no 5 98 Paraguay West leaner yes 4 38 Algeria East leaner no 5 98 Paraguay West leaner yes 4 38 Algeria West leaner yes 2 101 Rw	28 Cameroon	East leaner	no	5	88 Nicaragua E	ast leaner	no	
31 Colombia East leaner no 5 91 New Zealand West leaner yes 2 2 32 Costa Rica East leaner no 4 92 Pakistan East leaner no 5 33 Cyprus West leaner yes 2 93 Panama East leaner no 4 4 34 Czechia West leaner yes 3 94 Peru East leaner no 4 35 Germany West leaner yes 3 95 Philippines West leaner yes 3 36 Denmark West leaner yes 2 96 Poland West leaner yes 3 37 Dominican Republic East leaner no 4 97 Portugal East leaner yes 3 38 Algeria East leaner no 5 99 Qatar West leaner yes 4 38 Algeria East leaner no 5 99 Qatar West leaner no 1 39 Ecuador East leaner no 5 99 Qatar West leaner no 5 20 Catar West leaner no 5 50 Catar West leaner yes 3 50 Catar West leaner yes 2 50 Catar West leaner yes 2 50 Catar West leaner yes 3 50 Catar West leaner yes 2 50 Catar West leaner yes 3 50 Catar West leaner yes 3 50 Catar West leaner yes 2 50 Catar West leaner yes 2 50 Catar West leaner yes 2 50 Catar West leaner yes 3 50 Catar We	29 Democratic Republic of the Cong	gcEast leaner	no	5	89 Netherlands V	Vest leaner	yes	2
32 Costa Rica East leaner no 4 92 Pakistan East leaner no 5 33 Cyprus West leaner yes 2 93 Panama East leaner no 4 34 Czechia West leaner yes 3 94 Peru East leaner no 4 35 Germany West leaner yes 3 95 Philippines West leaner no 2 36 Denmark West leaner yes 2 96 Poland West leaner yes 3 37 Dominican Republic East leaner no 4 97 Portugal East leaner yes 4 38 Algeria East leaner no 5 99 Qatar West leaner yes 4 39 Ecuador East leaner no 5 100 Russia East leaner no 5 41 Spain West leaner yes 3 102 Saudi Arabia East leaner no 5 42 Estonia West leaner yes 3 102	-	East leaner	no		·	Vest leaner	yes	
33 Cyprus West leaner yes 2 93 Panama East leaner no 4 34 Czechia West leaner yes 3 94 Peru East leaner no 4 35 Germany West leaner yes 3 95 Philippines West leaner no 2 36 Denmark West leaner yes 2 96 Poland West leaner yes 3 37 Dominican Republic East leaner no 4 97 Portugal East leaner yes 4 38 Algeria East leaner no 5 98 Paraguay West leaner no 1 39 Ecuador East leaner no 5 90 Qatar West leaner no 2 40 Egypt East leaner no 5 100 Russia East leaner no 5 41 Spain West leaner yes 2 101 Rwanda East leaner no 5 42 Estonia West leaner yes 3 102 Saudi Arabi	31 Colombia	East leaner	no	5	91 New Zealand V	Vest leaner	yes	
34 Czechia West leaner yes 3 94 Peru East leaner no 4 35 Germany West leaner yes 3 95 Philippines West leaner no 2 36 Denmark West leaner yes 2 96 Poland West leaner yes 3 37 Dominican Republic East leaner no 4 97 Portugal East leaner no 1 38 Algeria East leaner no 5 98 Paraguay West leaner no 1 39 Ecuador East leaner no 5 99 Qatar West leaner no 5 40 Egypt East leaner no 5 100 Russia East leaner no 5 41 Spain West leaner yes 2 101 Rwanda East leaner no 5 42 Estonia West leaner yes 3 102 Saudi Arabia East leaner no 5 42 Estonia West leaner yes 2 104 Sing	32 Costa Rica	East leaner	no			ast leaner	no	
35 Germany West leaner yes 3 95 Philippines West leaner no 2 36 Demmark West leaner yes 2 96 Poland West leaner yes 3 37 Dominican Republic East leaner no 4 97 Portugal East leaner yes 4 38 Algeria East leaner no 5 98 Paraguay West leaner no 1 39 Ecuador East leaner no 5 99 Qatar West leaner no 5 40 Egypt East leaner no 5 100 Russia East leaner no 5 41 Spain West leaner yes 2 101 Rwanda East leaner no 5 42 Estonia West leaner yes 2 101 Rwanda East leaner no 5 42 Estonia West leaner yes 2 104 Singapore West leaner no 5 43 Ethiopia East leaner no 5 105 El	• • • • • • • • • • • • • • • • • • • •		yes				no	
36 Denmark West leaner yes 2 96 Poland West leaner yes 3 37 Dominican Republic East leaner no 4 97 Portugal East leaner no 1 38 Algeria East leaner no 5 98 Paraguay West leaner no 1 39 Ecuador East leaner no 5 99 Qatar West leaner no 2 40 Egypt East leaner no 5 100 Russia East leaner no 5 41 Spain West leaner yes 2 101 Rwanda East leaner no 5 42 Estonia West leaner yes 3 102 Saudi Arabia East leaner no 4 43 Ethiopia East leaner no 5 103 Senegal East leaner no 5 44 Finji East leaner no 5 105 El Salvador East leaner no 5 45 Fiji East leaner yes 3 106 Slovakia West leaner yes 3 46 France West leaner yes 3 106 Slovakia West leaner yes 3 47 United Kingdom West leaner yes 2 107 Slovenia West leaner yes 3 48 Georgia East leaner no 5 109 Seychelles East leaner no 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 5 53 Guyana West leaner no 4 112 Tanzania East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner no 4 116 Ukraine West leaner yes 3 56 Hungary East leaner no 2 118 Vietnam West leaner no 5 58 India West leaner no 2 118 Vietnam West leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 59 Ireland			•					
37 Dominican Republic East leaner no 4 97 Portugal East leaner yes 4 38 Algeria East leaner no 5 98 Paraguay West leaner no 1 39 Ecuador East leaner no 5 99 Qatar West leaner no 2 40 Egypt East leaner no 5 100 Russia East leaner no 5 41 Spain West leaner yes 2 101 Rwanda East leaner no 5 42 Estonia West leaner yes 3 102 Saudi Arabia East leaner no 4 43 Ethiopia East leaner no 5 103 Senegal East leaner no 5 44 Finland West leaner yes 2 104 Singapore West leaner yes 3 45 Fiji East leaner no 5 105 El Salvador East leaner no 5 46 France West leaner yes 3 106 Slovakia West leaner yes 3 48 Georgia East leaner no 4 108 Sweden West leaner yes 3 48 Georgia East leaner no 5 109 Seychelles East leaner no 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 5 52 Guatemala West leaner no 4 112 Tanzania East leaner no 5 53 Guyana West leaner yes 4 115 Uruguay East leaner no 5 54 Honduras East leaner no 4 116 Uruguay East leaner no 5 55 Hungary East leaner no 2 118 West leaner yes 2 57 Indonesia East leaner no 2 118 Viruguay East leaner no 5 58 India West leaner yes 2 119 South Africa East leaner no 5 58 India West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5								
38 Algeria East leaner no 5 98 Paraguay West leaner no 1 39 Ecuador East leaner no 5 99 Qatar West leaner no 2 40 Egypt East leaner no 5 100 Russia East leaner no 5 41 Spain West leaner yes 2 101 Rwanda East leaner no 5 42 Estonia West leaner yes 3 102 Saudi Arabia East leaner no 5 43 Ethiopia East leaner no 5 103 Senegal East leaner no 5 44 Finland West leaner yes 2 104 Singapore West leaner yes 3 45 Fiji East leaner no 5 105 El Salvador East leaner no 5 46 France West leaner yes 3 106 Slovakia West leaner yes 3 48 Georgia East leaner no 4 108 Sweden West leaner yes 3 48 Georgia East leaner no 5 109 Seychelles East leaner no 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 5 53 Guatemala West leaner no 2 113 Uganda East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner no 4 116 United States West leaner yes 2 57 Indonesia East leaner no 2 118 Vietnam West leaner no 5 58 India West leaner no 2 118 Vietnam West leaner no 5 58 India West leaner no 2 118 Vietnam West leaner no 5 58 India West leaner no 2 118 Vietnam West leaner no 5 58 India West leaner no 2 118 Vietnam West leaner no 5 59 Ireland West leaner no 2 118 Vietnam West leaner no 5 59 Ireland West leaner no 2 118 Vietnam West leaner no 5 59 Ireland West leaner no 2 118 Vietnam West leaner no 5 59 Ireland West leaner no 2 118 Vietnam West leaner no 5								
39 Ecuador East leaner no 5 99 Qatar West leaner no 2 40 Egypt East leaner no 5 100 Russia East leaner no 5 41 Spain West leaner yes 2 101 Rwanda East leaner no 5 42 Estonia West leaner yes 3 102 Saudi Arabia East leaner no 4 43 Ethiopia East leaner no 5 103 Senegal East leaner no 5 44 Finland West leaner yes 2 104 Singapore West leaner yes 3 45 Fiji East leaner no 5 105 El Salvador East leaner no 5 46 France West leaner yes 3 106 Slovakia West leaner yes 3 47 United Kingdom West leaner yes 2 107 Slovenia West leaner yes 3 48 Georgia East leaner no 4 108 Sweden West leaner yes 2 49 Ghana East leaner no 5 109 Seychelles East leaner no 5 51 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 5 53 Guyana West leaner no 4 111 Thailand West leaner yes 3 55 Croatia East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner no 4 116 United States West leaner yes 2 57 Indonesia East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner yes 2 118 Vietnam West leaner no 5 58 India West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 50 Iran East leaner no 2 118 Vietnam West leaner no 5 58 India East leaner no 6 118 Vietnam West leaner no 5 59 Ireland East leaner yes 2 119 South Africa East leaner no 5 59 Ireland East leaner no 6 118 Vietnam West leaner no 5	·				-		•	
40 Egypt East leaner no 5 100 Russia East leaner no 5 41 Spain West leaner yes 2 101 Rwanda East leaner no 5 42 Estonia West leaner yes 3 102 Saudi Arabia East leaner no 4 4 3 Ethiopia East leaner no 5 103 Senegal East leaner no 5 44 Finland West leaner yes 2 104 Singapore West leaner yes 3 45 Fiji East leaner no 5 105 El Salvador East leaner no 5 46 France West leaner yes 3 106 Slovakia West leaner yes 3 47 United Kingdom West leaner yes 2 107 Slovenia West leaner yes 3 48 Georgia East leaner no 4 108 Sweden West leaner yes 2 49 Ghana East leaner no 5 109 Seychelles East leaner no 5 5 10 Greece West leaner yes 2 110 Togo East leaner no 5 105 Greada East leaner no 4 111 Thailand West leaner no 5 105 Greada East leaner no 1 112 Tanzania East leaner no 5 105 Guyana West leaner yes 4 115 Uruguay East leaner no 5 105 Groatia East leaner no 5 113 Uruguay East leaner no 5 114 Uruguay East leaner no 5 115 Uruguay East leaner no 5 116 Uruguay East leaner no 5 116 Uruguay East leaner no 5 117 Uruguay East leaner no 5 118 Uru	-							
41 Spain West leaner yes 2 101 Rwanda East leaner no 5 42 Estonia West leaner yes 3 102 Saudi Arabia East leaner no 4 43 Ethiopia East leaner no 5 103 Senegal East leaner no 5 44 Finland West leaner yes 2 104 Singapore West leaner yes 3 45 Fiji East leaner no 5 105 El Salvador East leaner no 5 46 France West leaner yes 3 106 Slovakia West leaner yes 3 47 United Kingdom West leaner yes 2 107 Slovenia West leaner yes 3 48 Georgia East leaner no 4 108 Sweden West leaner yes 2 49 Ghana East leaner no 5 109 Seychelles East leaner no 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 3 52 Guatemala West leaner no 1 112 Tanzania East leaner no 5 53 Guyana West leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uriguay East leaner no 5 56 Hungary East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner yes 2 118 Vietnam West leaner no 5 58 India West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 50 Iran East leaner no 6 118 Vietnam West leaner no 5 58 India East leaner no 6 118 Vietnam Nest leaner no 6 59 Ireland East leaner no 6 118 Vietnam Nest leaner no 6 50 Iran East leaner no 6 118 Vietnam Nest leaner no 6 50 Iran East leaner no 6 118 Vietnam East leaner no 6 50 Iran East leaner no 6								
42 Estonia West leaner yes 3 102 Saudi Arabia East leaner no 4 43 Ethiopia East leaner no 5 103 Senegal East leaner no 5 44 Finland West leaner yes 2 104 Singapore West leaner yes 3 45 Fiji East leaner no 5 105 El Salvador East leaner no 5 46 France West leaner yes 3 106 Slovakia West leaner yes 3 47 United Kingdom West leaner yes 2 107 Slovenia West leaner yes 3 48 Georgia East leaner no 4 108 Sweden West leaner yes 2 49 Ghana East leaner no 5 109 Seychelles East leaner no 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 3 52 Guatemala West leaner no 1 112 Tanzania East leaner no 5 53 Guyana West leaner no 2 113 Uganda East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uruguay East leaner no 5 56 Hungary East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner yes 2 118 Vietnam West leaner no 5 58 India West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 50 Iran East leaner no 5								
43 Ethiopia East leaner no 5 103 Senegal East leaner no 5 44 Finland West leaner yes 2 104 Singapore West leaner yes 3 45 Fiji East leaner no 5 105 El Salvador East leaner no 5 46 France West leaner yes 3 106 Slovakia West leaner yes 3 47 United Kingdom West leaner yes 2 107 Slovenia West leaner yes 3 48 Georgia East leaner no 4 108 Sweden West leaner yes 2 49 Ghana East leaner no 5 109 Seychelles East leaner no 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 5 52 Guatemala West leaner no 1 112 Tanzania East leaner no 5 53 Guyana West leaner no 2 113 Uganda East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uruguay East leaner no 5 56 Hungary East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner yes 2 118 Vietnam West leaner no 5 58 India West leaner yes 2 118 Vietnam West leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 50 Ireland East leaner no 6 5	•							
44 Finland West leaner yes 2 104 Singapore West leaner yes 3 45 Fiji East leaner no 5 105 El Salvador East leaner no 5 46 France West leaner yes 3 106 Slovakia West leaner yes 3 47 United Kingdom West leaner yes 2 107 Slovenia West leaner yes 3 48 Georgia East leaner no 4 108 Sweden West leaner yes 2 49 Ghana East leaner no 5 109 Seychelles East leaner no 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 3 52 Guatemala West leaner no 1 112 Tanzania East leaner no 5 53 Guyana West leaner no 2 113 Uganda East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uruguay East leaner no 5 56 Hungary East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner yes 2 118 Vietnam West leaner no 5 58 India West leaner yes 2 119 South Africa East leaner no 5 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 4 120 Zambia East leaner no 5								
45 Fiji East leaner no 5 105 El Salvador East leaner no 5 46 France West leaner yes 3 106 Slovakia West leaner yes 3 47 United Kingdom West leaner yes 2 107 Slovenia West leaner yes 3 48 Georgia East leaner no 4 108 Sweden West leaner yes 2 49 Ghana East leaner no 5 109 Seychelles East leaner no 5 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 3 52 Guatemala West leaner no 1 1112 Tanzania East leaner no 5 53 Guyana West leaner no 2 113 Uganda East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uruguay East leaner yes 3 56 Hungary East leaner yes 4 116 United States West leaner yes 2 57 Indonesia East leaner no 2 118 Vietnam West leaner no 5 58 India West leaner yes 2 119 South Africa East leaner no 3 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 50 Iran East leaner no 6 5 50 Iran East leaner no 7 50 Iran East leaner	·				ŭ			
46 France West leaner yes 3 47 United Kingdom West leaner yes 2 48 Georgia East leaner no 4 49 Ghana East leaner no 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Greada East leaner no 4 111 Thailand West leaner no 5 53 Guyana West leaner no 1 112 Tanzania East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uruguay East leaner no 5 56 Hungary East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner no 2 118 Vietnam West leaner no 3 59 Ireland West leaner no 2 119 South Africa East leaner no 3 59 Ireland West leaner no 3 50 Iran East leaner no 5 51 Groatia East leaner no 5 52 Guatemala West leaner no 5 53 Guyana West leaner no 6 54 Honduras East leaner no 6 55 Croatia East leaner yes 6 56 Hungary East leaner no 7 57 Indonesia East leaner no 8 58 India West leaner no 9 59 Ireland West leaner no 9 50 Iran East leaner no 5 50 Iran							•	
47 United Kingdom West leaner yes 2 107 Slovenia West leaner yes 3 48 Georgia East leaner no 4 108 Sweden West leaner yes 2 49 Ghana East leaner no 5 109 Seychelles East leaner no 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 3 52 Guatemala West leaner no 1 112 Tanzania East leaner no 5 53 Guyana West leaner no 2 113 Uganda East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uruguay East leaner no 5 56 Hungary East leaner yes 4 116 United States West leaner yes 2 57 Indonesia East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner yes 2 118 Vietnam West leaner no 3 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 5	•							
48 Georgia East leaner no 4 108 Sweden West leaner yes 2 49 Ghana East leaner no 5 109 Seychelles East leaner no 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 3 52 Guatemala West leaner no 1 112 Tanzania East leaner no 5 53 Guyana West leaner no 2 113 Uganda East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uruguay East leaner no 5 56 Hungary East leaner yes 4 116 United States West leaner yes 2 57 Indonesia East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner yes 2 118 Vietnam West leaner no 3 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 4 120 Zambia East leaner no 5								
49 Ghana East leaner no 5 109 Seychelles East leaner no 5 50 Greece West leaner yes 2 110 Togo East leaner no 5 51 Grenada East leaner no 4 111 Thailand West leaner no 3 52 Guatemala West leaner no 1 112 Tanzania East leaner no 5 53 Guyana West leaner no 2 113 Uganda East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uruguay East leaner no 5 56 Hungary East leaner yes 4 116 United States West leaner yes 2 57 Indonesia East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner yes 2 118 Vietnam West leaner no 3 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 4 120 Zambia East leaner no 5	· ·							
50 GreeceWest leaneryes2110 TogoEast leanerno551 GrenadaEast leanerno4111 ThailandWest leanerno352 GuatemalaWest leanerno1112 TanzaniaEast leanerno553 GuyanaWest leanerno2113 UgandaEast leanerno554 HondurasEast leanerno4114 UkraineWest leaneryes355 CroatiaEast leaneryes4115 UruguayEast leanerno556 HungaryEast leaneryes4116 United StatesWest leaneryes257 IndonesiaEast leanerno4117 UzbekistanEast leanerno558 IndiaWest leanerno2118 VietnamWest leanerno359 IrelandWest leaneryes2119 South AfricaEast leanerno560 IranEast leanerno4120 ZambiaEast leanerno5								
51 Grenada East leaner no 4 111 Thailand West leaner no 3 52 Guatemala West leaner no 1 112 Tanzania East leaner no 5 53 Guyana West leaner no 2 113 Uganda East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uruguay East leaner no 5 56 Hungary East leaner yes 4 116 United States West leaner yes 2 57 Indonesia East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner yes 2 118 Vietnam West leaner no 3 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 4 120 Zambia East leaner no 5								
52 Guatemala West leaner no 1 112 Tanzania East leaner no 5 53 Guyana West leaner no 2 113 Uganda East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uruguay East leaner no 5 56 Hungary East leaner yes 4 116 United States West leaner yes 2 57 Indonesia East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner no 2 118 Vietnam West leaner no 3 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 4 120 Zambia East leaner no 5								
53 Guyana West leaner no 2 113 Uganda East leaner no 5 54 Honduras East leaner no 4 114 Ukraine West leaner yes 3 55 Croatia East leaner yes 4 115 Uruguay East leaner no 5 56 Hungary East leaner yes 4 116 United States West leaner yes 2 57 Indonesia East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner no 2 118 Vietnam West leaner no 3 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 4 120 Zambia East leaner no 5								
54 HondurasEast leanerno4114 UkraineWest leaneryes355 CroatiaEast leaneryes4115 UruguayEast leanerno556 HungaryEast leaneryes4116 United StatesWest leaneryes257 IndonesiaEast leanerno4117 UzbekistanEast leanerno558 IndiaWest leanerno2118 VietnamWest leanerno359 IrelandWest leaneryes2119 South AfricaEast leanerno560 IranEast leanerno4120 ZambiaEast leanerno5								
55 Croatia East leaner yes 4 115 Uruguay East leaner no 5 56 Hungary East leaner yes 4 116 United States West leaner yes 2 57 Indonesia East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner no 2 118 Vietnam West leaner no 3 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 4 120 Zambia East leaner no 5								
56 Hungary East leaner yes 4 116 United States West leaner yes 2 57 Indonesia East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner no 2 118 Vietnam West leaner no 3 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 4 120 Zambia East leaner no 5								
57 Indonesia East leaner no 4 117 Uzbekistan East leaner no 5 58 India West leaner no 2 118 Vietnam West leaner no 3 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 4 120 Zambia East leaner no 5								
58 India West leaner no 2 118 Vietnam West leaner no 3 59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 4 120 Zambia East leaner no 5								
59 Ireland West leaner yes 2 119 South Africa East leaner no 5 60 Iran East leaner no 4 120 Zambia East leaner no 5								
60 Iran East leaner no 4 120 Zambia East leaner no 5								
	-		-	•				

Note: "Country group" refers to the grouping used in the main analysis. "RUS sanctions" denotes whether country has imposed sanctions on Russia following its full scale attack on Ukriane. "Category by Hersovitch (2025)" denotes the robustness check using three distinct blocs, see also Section 4.1.