

Threat potential in the economy: from vulnerabilities to China's increased coercion



Hybrid CoE Trend Reports highlight trends and theme clusters related to hybrid threats. They provide multiple perspectives on current security challenges and generate academic discourse on the topic. They aim to distinguish between what constitutes a threat, what appears to be a threat but is not necessarily one, and what has the potential to become one.

The European Centre of Excellence for Countering Hybrid Threats

tel. +358 400 253800 | www.hybridcoe.fi

ISBN (web) 978-952-7472-74-3

ISBN (print) 978-952-7472-75-0

ISSN 2670-1804 (web)

ISSN 2814-7200 (print)

June 2023

Cover photo: Romas Photo / shutterstock.com

Hybrid CoE's mission is to strengthen its Participating States' security by providing expertise and training for countering hybrid threats, and by enhancing EU-NATO cooperation in this respect. The Centre is an autonomous hub for practitioners and experts, located in Helsinki, Finland.

The responsibility for the views expressed ultimately rests with the authors.

Contents

Executive summary	5
Introduction	7
Trend 1: Intensified economic coercion	8
Trend 2: China’s growing footprint	10
Increasing Chinese norm-setting power	11
China’s domestic determinants	13
International challenges for Beijing.....	15
Trend 3: Challenges to energy supply and post-dependency vulnerabilities	18
Trend 4: Challenges to critical infrastructure and open market principles	21
Open markets and the complexity of financial markets	23
Vulnerable immaterial infrastructure and assets, intellectual properties, and knowledge security.....	25
Trend 5: Challenges to supply chains	27
Non-military supply chains	27
The role of China and Russia	28
Conclusions and outlook	30
Building systemic resilience for democracies	30
A bloc of like-minded economies	32
A liberal whole-of-society approach	33
Authors	35

Executive summary

This report discusses key trends in the economic domain and considers their threat potential for liberal democracies. As the predominant trend, the report observes **1) the intensified economic coercion**¹ that takes place amid broader questions of the global balance of power and reciprocity. Related to the first trend, the report argues that **2) China's growing footprint** in the global economy poses threats for liberal democracies in three overlapping frameworks: at a systemic level in an indirect way; at a national trade level in a direct way; and at an "operational" level using legal and illegal means to gain an economic advantage.

While China is prepared to use economic coercion to achieve political goals, as the third trend, the report discusses **3) challenges to energy supply and post-dependency vulnerabilities**. Russia in particular has utilized energy (and food) as a means of economic statecraft since the invasion of Ukraine. Energy-related vulnerabilities have emerged in recent decades, while countries have cooperated with Russia to secure cheap energy to fuel economic growth. Russia, together with the OPEC+ formation, continues to manipulate energy markets through price-supporting production cuts to crude oil, despite calls for the group to pump more to lower fuel prices, thereby helping the global economy.

For its part, Beijing is calling for oil, traditionally traded in dollars, to be traded in Chinese yuan. Although this has not materialized to a significant extent and markets are sceptical about this arrangement, a substitute currency could devalue the dollar and have an adverse impact on Western markets. The proposal is connected to Beijing's long-term goal to enhance the physical and digital yuan.

These developments also point to **4) challenges to critical infrastructure and open market principles**, which the report notes as the fourth trend. Potential ways and channels to seriously affect material and immaterial infrastructure include cyberattacks, social media, and the malign use of artificial intelligence (AI). Furthermore, a potential threat is posed by financial tools that are not visible to any single authority.

While a malign actor can use vulnerabilities presented by open markets in multiple direct ways, an indirect economic threat is formed through the democratic state intervening in open markets due to national security. This violates the basic principles of liberal market economies, potentially limits the functioning of the market, and introduces market insecurities.

While these trends require adjustments by Western-style liberal democracies, as the fifth trend, the report also discusses **5) challenges to supply chain security**, which include manipulation of demand and supply in open economies. Dependency on global value chains, on one provider of many critical raw materials / components, and on a few large private companies for information flows and payment systems, are all vulnerabilities which malign actors can take advantage of.

The report notes that in planning responses, Western-style societies should recognize that democracy and national security need to go hand in hand and should be considered together with a liberal and open economy as a way forward. This will create opportunities for state intervention where and when needed, for example in the case of the EU's anti-coercion instrument.

1 Restricting or threatening to restrict trade or investment to bring about a change of policy in the target country or region.

Overall, while an indirect threat is posed by state intervention in areas related to national security and public order, which may hamper the functioning of open markets, at the same time, state intervention in key areas would ensure more transparency and predictability, which are needed to secure resilience against malign actors.

Asian economies, which are increasing their share of global GDP and thus driving global growth, will in any case require adjustments from transatlantic economies.² Thus, the report asks: **What is the correct Western response to both legitimate and coercive economic competition stemming from Asia in general and China in particular?** Is accepting the interconnectedness and coexistence with a malign but economically beneficial actor, such as China, an acceptable solution, given that this threatens the stability of the rules-based global economy?

While requiring full reciprocity³ is important, it is unlikely that China would consent to this. Indeed, China is already exploiting Western vulnerabilities to create disunity and to punish those that are not receptive to Chinese coercive behaviour. Beijing also appears to be aware that controlling the economies of the broader Global South is strategically vital. Added to this, Russian political messaging in the Middle East and throughout the Global South creates a vulnerability for Western interests and should therefore be more proactively countered.

Hence, competition over gaining control of the global economy is accelerating. The report argues that **the building of two economic blocs, that is, a fragmented global economy with the US and China and their partners in**

their respective corners, cannot be ruled out as a possible future scenario. While this will hurt countries in both camps, a democratic bloc would have a sizable advantage: the liberal camp would be more self-sufficient with better market demographics, namely a bigger middle class.

Lastly, the report discusses the possibilities that a “Western-led” bloc has to re-shore and thus limit China’s access to strategic assets.

Engaging the Global South in a strategic dialogue would constitute a key aim. Should an economic alliance be formed involving like-minded countries, one potential model could involve certain European and Asian countries, such as Sweden, Germany, Japan, and South Korea, in the production of software, whereas manufacturing could be performed in countries such as Mexico and Vietnam. The role of key players such as the EU, the US, and the UK would be to take the initiative and strengthen cooperation in this regard: Initial steps should include the identification of shared situational awareness and a sustainable vision of the future.

A liberal whole-of-society approach in the economic domain, which would have the capacity to respond to Beijing’s co-opting of the Chinese non-state sector, presents a challenging but much-needed long-term policy goal. Some democratic states, however, such as France and the Nordic countries, are already cooperating closely with the business sector. Furthermore, public-private cooperation can also be extensive in the US when regarded as strategically important. These examples should provide a model and a way forward for the transatlantic community in general.

2 Including demand for materials, innovation, and market size.

3 Requiring/allowing China and the West to invest on equal terms in each other’s economy.

Introduction

The focus of this Trend Report is on issues in the global economy that are, or are expected to be, relevant from the viewpoint of hybrid threats.

The report duly investigates economic trends through a hybrid threats lens. It discusses activities below the threshold of aggressive policies that would trigger retaliation in the economic domain. Hybrid threats are accordingly employed as force multipliers and coercion tactics. They compensate for apparently under-performing strategies and policies that a malign state actor otherwise uses.⁴

The report is based on both internal research and monitoring conducted by Hybrid CoE, as

well as extensive discussions with experts in the private and public sector in Europe, the US, and Asia Pacific. The report thus combines expert views and timely observations on the key trends and their threat potential for the transatlantic community in the economic domain in 2023.

The structure of the report follows the observed trends, namely intensified economic coercion, China's growing footprint, challenges to the energy supply and post-dependency vulnerabilities, challenges to critical infrastructure and open market principles, as well as challenges to supply chains, respectively. The report concludes with a discussion on democratic responses.

4 Giannopoulos, Georgios, Hanna Smith, and M. Theocharidou, 'The Landscape of Hybrid Threats: A Conceptual Model', (Hybrid CoE and the European Commission, 2021), https://www.hybridcoe.fi/wp-content/uploads/2021/02/conceptual_framework-reference-version-shortened-good_cover_-_publication_office.pdf.

Trend 1: Intensified economic coercion

Overall, Asian economies are increasing their share of global GDP and market size, while driving global growth, and the demand for materials and innovation. China, the second largest economy in the world, has steadily increased its share of global trade and GDP. In 2019, China was the main trading partner of 137 countries, whereas the US notched up 58 countries in comparison.⁵ According to UN projections,⁶ the shift in global population will place four out of every five individuals on the planet in Asia or Africa in 75 years. This will further increase the importance of these areas as future markets.

This development will require adjustments from Western liberal democracies while, at the same time, responding to China's more coercive economic behaviour remains a necessity. As the overall emerging trend, economic coercion consists of restricting or threatening to restrict trade or investment to bring about a change of policy in the target country or region. Measures vary from using explicit coercion and trade defence tools, to selective border or food safety checks on goods from a given country, to boycotts on goods of certain origin.

The EU has already taken measures to respond to economic coercion by developing an anti-coercion instrument.⁷ The instrument counters the use of economic coercion by third countries, meaning that the aim is to deter malign state actors from restricting or threatening to restrict trade or investment to influence EU policy. Thus far, the significance of

the instrument lies in the fact that EU member states and institutions agree on the urgency and the nature of the threat.⁸

China has applied economic coercion to the Pacific region (e.g., Australia, Taiwan), but also to the EU's internal market (e.g., Lithuania, Germany).⁹ China aims to amplify disunity and decentralized decision-making to drive wedges between EU member states, and also uses ownership/lender rights in an aggressive way through the Belt and Road Initiative (BRI). This predatory behaviour is designed to interfere in the economic structures of the target country, while building a strategic position.

These cases show that China is prepared to use economic coercion to achieve political goals. Russia has also been seen to utilize energy as a means of economic statecraft after the invasion of Ukraine. Even before the invasion, instrumentalized migration was included in Russia's coercive economic toolbox. Given that the impact of instrumentalized migration on the target country is an economic one (in addition to social, cultural, and political impacts), it can be deemed an economic tool.

Thus, a dilemma is created: What is the correct Western response to both legitimate and coercive economic competition stemming from Asia in general and China in particular? The situation also begs the question of whether accepting interconnectedness and coexistence is an acceptable solution even when this might threaten the stability of the rules-

5 See <https://knoema.com/infographics/hxkevje/global-economic-trends-us-overtaken-by-china-as-a-global-trade-power>.

6 See <https://population.un.org/wpp/Graphs/DemographicProfiles/Line/900>.

7 See https://ec.europa.eu/commission/presscorner/detail/en/ip_21_6642.

8 See e.g., <https://institutmontaigne.org/en/expressions/effective-deterrence-coming-european-anti-coercion-instrument>.

9 See e.g., <https://cepa.org/events/lithuanias-response-to-chinese-malign-influence/>.

based global economy and the Western liberal democracies.

A good example of the prominent position of Beijing, and the economic interconnectedness between China and the West, is the impact of China's closure on global inflation during the Covid-19 pandemic. Although opinions differ on the severity, ranging from significant inflation consequences to mild supply-chain disturbances and limited inflation consequences, the consensus is that Beijing's actions had an impact on global inflation.

In this regard, demanding full reciprocity (requiring/allowing China and the West to invest on equal terms in each other's economy) is important. This would allow the West, firstly, to maintain the moral high ground, while not jeopardizing liberal values by imposing restrictions but requiring equal treatment instead, and secondly, to balance economic fluctuations and dependencies in single areas of supply and demand. It is not generally expected to be possible, however, due to Beijing's unreliable behaviour.¹⁰

The measures taken by China and Russia point to vulnerabilities in the functioning of open economic systems, including the manipulation of demand and supply. Dependency on

global value chains, on one provider of many critical raw materials and components, and on a few large private companies for information flows and payment systems, are vulnerabilities which any malign actor can take advantage of.

On the other hand, liberal economies have proved to be resilient and shock-absorbing, as was attested by Covid-19-related economic issues, which showed that the shock to the economy remained relatively mild. Thus, on the one hand, the conditions where and when a shock is introduced and, on the other, what the conditions are when the shock is amplified matter greatly. Concurrently, the conditions where a shock is mitigated and the way in which the economy absorbs the shock also matter. Russia is a case in point in this respect; due to skilful central bank manoeuvring, the Russian economy has adapted very well to the new sanction-dictated conditions.

Nonetheless, competition over gaining control of the global economy is accelerating. The trade wars hurt the respective countries, yet they are inevitably waged. Metaphorically speaking, it appears that everybody is "pouring acid into the common pool" to see who the last man standing will be.

¹⁰ See <https://www.forbes.com/sites/roslynlayton/2022/12/07/is-commerce-getting-played-by-the-chinese-government-on-export-controls/?sh=216c923b49f>.

Trend 2: China's growing footprint

China's growing footprint in the global economy poses threats for liberal democracies in three overlapping frameworks: 1) at a systemic level in an indirect way (introducing parallel institutions, values, and norms);¹¹ 2) at a national trade level in a direct way (using sanctions, embargos, boycotts, market access denials, judicial means);¹² and 3) at an operational level using legal and illegal means to gain an economic advantage (economic espionage, mergers and acquisitions, infrastructure investments).¹³

Beijing is also aware that controlling the economies of the broader Global South is vital. Southeast Asian markets, for instance, are of paramount importance to China's BRI. Thus, Beijing entangles the Global South, including growing markets in Africa, in infrastructure projects, often wasting money and resources, and at times with questionable business objectives but clear strategic aims. For nationalist reasons, President Xi Jinping has been insisting on China leading a power shift from the West to East Asia and the Global South.¹⁴ The latter is increasingly becoming economically dependent on China. At the same time, key Western institutions remain adamant that China should be viewed simultaneously as both a partner for

cooperation and negotiation and an economic competitor, as well as a systemic rival.¹⁵

China uses a wide range of tools such as hoarding rare earth minerals,¹⁶ more traditional economic espionage,¹⁷ and to an extent what could be called debt trap diplomacy. China has been accused of giving developing countries loans, which they cannot pay back, thereby granting China ownership of critical infrastructure, for instance in Sri Lanka.¹⁸ While a consensus exists that Chinese lending includes risks, including so-called hidden clauses and detrimental covenants in the lending contracts, there is little evidence to date that debt trap diplomacy is a high-level risk for the global economy.¹⁹ However, hidden loans and non-transparent loan agreements pose a significant threat to the economic wellbeing of the countries in the Global South. These are often associated with elite and key economic actor corruption.²⁰ Regarding rare earth minerals, China strives for market dominance, creating future concerns for liberal economies in areas such as the green transformation and critical technologies (e.g., computers, drones and 3D printing, aviation and space, lasers, optics, and the defence industry). This aim has often been

11 See <https://www.brookings.edu/research/global-china-global-governance-and-norms/>.

12 See <https://www.csis.org/analysis/chinas-economic-coercion-lessons-lithuania>.

13 See <https://www.bbc.com/news/world-asia-china-64206950>.

14 See <https://asia.nikkei.com/Politics/International-relations/US-China-tensions/China-eyes-Global-South-not-West-to-expand-influence-expert>.

15 See e.g., https://www.eeas.europa.eu/sites/default/files/documents/EU-China_Factsheet_01Apr2022.pdf.

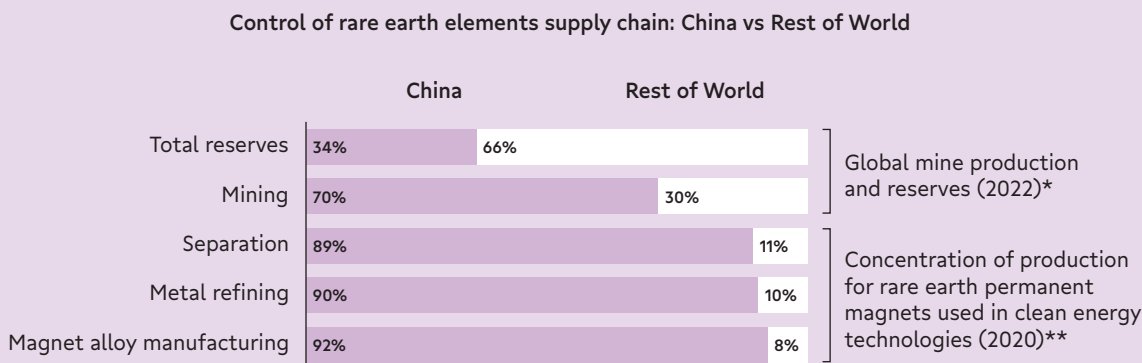
16 See <https://www.politico.com/news/magazine/2022/12/14/rare-earth-mines-00071102>.

17 See <https://www.csis.org/programs/strategic-technologies-program/archives/survey-chinese-espionage-united-states-2000>.

18 See e.g., <https://www.washingtonpost.com/world/2022/07/20/sri-lanka-china-debt-trap/>.

19 See <https://www.cgdev.org/sites/default/files/how-china-lends-rare-look-100-debt-contracts-foreign-governments.pdf>.

20 See <https://fortune.com/2023/05/18/china-belt-road-loans-pakistan-sri-lanka-africa-collapse-economic-instability/>.

Figure 1. Control of rare earth elements

* <https://pubs.usgs.gov/periodicals/mcs2023/mcs2023-rare-earths.pdf>.

** <https://www.energy.gov/sites/default/files/2022-02/Neodymium%20Magnets%20Supply%20Chain%20Report%20-%20Final.pdf>.

discussed in the Chinese state media,²¹ and very recently a shift in Chinese investment patterns to Europe has been observed. There is an increased focus on electric vehicle battery factories, and greenfield investments are now the major Chinese investment activity in the EU and the UK.²²

Economic actors in Western democracies duly need to adapt to view China as a systemic rival, and not only as an economic partner or competitor. This approach poses risks in and of itself, as focusing on the systemic rival perspective may result in overlooking the competitor and partner aspects. However, considering the growing interdependence between China and the West, and the fact that this has already been instrumentalized by China, the adjustment could be argued as necessary, even if the process is not straightforward. The inevitable conclusion even now is that China is trying to use Western vulnerabilities to create disunity and to

punish those that do not accept Chinese coercive behaviour.

Increasing Chinese norm-setting power

While the CCP has a long history of engaging in economic statecraft, it has recently been proactive in using economic tools to coerce countries into changing policy. In the governance framework, China aims to influence institutions and international organizations through legal frameworks for instance (e.g., by influencing Hungary's legislation²³), or by corrupting and impeding²⁴ the United Nations. In doing so, Beijing erodes the trustworthiness of the institutional system from within. Liberal, open market-based economies, as well as willing governments effectively enable easy penetration for China.

A practical aspect of China's predatory behaviour is the cultivation or co-optation of decision-makers (elite capture), affecting public

21 See e.g., <https://www.globaltimes.cn/page/201906/1153603.shtml>.

22 See: <https://merics.org/en/press-release/report-merics-and-rhodium-group-battery-investments-are-now-mainstay-chinese-fdi>.

23 See e.g., <https://erudera.com/news/hungarian-parliament-passes-bill-to-establish-china-fudan-university-campus-in-budapest/>.

24 See <https://thediplomat.com/2020/04/how-china-is-remaking-the-un-in-its-own-image/>.

opinion (e.g., through Confucius Institutes,²⁵ Hollywood,²⁶ narratives on hubris/victimhood²⁷), and providing financial incentives for key economic actors. Through this “weaponized corruption”, China asserts influence, which is difficult to investigate but which remains important at both national and local levels.²⁸ National-level governments might be unaware of the functioning or the extent of this tactic, given that it largely takes place offline (e.g., in the chamber of commerce or business meetings at the local level). In the future, co-opted elites, including local parties, may become Members of Parliament (MPs) and become indebted or have relations with China.

That said, the offer to join the rules-based trading system (RBS),²⁹ and grow within it, has been on the table for both Moscow and Beijing. Both, however, while giving the appearance of acceptance, have in fact been adamant in declining the offer. China, for instance, since

WTO entry, has exploited access to the international market while blocking Western access to the Chinese market.³⁰

Thus far, under the leadership of the US, the rules-based trading order has developed and benefitted most participating countries, especially China. At the same time, Chinese influence makes use of the *openness* and *transparency* of Western-style societies, while being able to adapt to circumvent the *rule of law* and *accountability* through not declaring intentions and modifying the autocratic playbook. The implicit implication is that China is increasingly able to influence international economic norms to its benefit.

As a whole, Chinese coercion undermines rules- and norm-based international institutions and global trade in applying methods that had been eradicated under the current GATT/WTO system.³¹ Well-known examples of using trade to influence political behaviour range from Europe³²

25 A number of countries are considering closing down, or have started to close down, Confucius Institutes (e.g., Finland, Sweden, Denmark, Germany, Belgium, the Netherlands, the UK, and the US) as they are considered an arm of the CCP.

26 Although the CCP has used market access denials as a means of influencing media production and self-censoring, it appears that some large media corporations have started to go against this trend, thereby missing out on the world’s largest market. See <https://edition.cnn.com/2022/07/08/media/hollywood-china-censors-box-office-intl-hnk/index.html>.

27 The CCP uses all relevant channels and tailors the messages to suit its purpose (i.e., claiming victimhood in the West and strength in the Global South). See e.g., <https://www.atlanticcouncil.org/in-depth-research-reports/report/chinas-discourse-power-operations-in-the-global-south/>. The CCP uses narrative diplomacy to try to reshape generally accepted definitions of democracy and to depict the Chinese system as an alternative form of democracy for non-Western states. This is done in part by exemplifying positive narratives about China as well as negative narratives about the West. See e.g., <https://www.globaltimes.cn/page/202203/1254216.shtml>.

28 See e.g., <https://www.businessinsider.com/anti-corruption-agents-hit-australias-labor-party-offices-over-china-ties-2018-12?r=US&IR=T>.

29 For details on RBS and the EU’s role in it, see e.g., <https://www.ceps.eu/ceps-publications/reviving-the-wto-and-rules-based-trading/>.

30 See e.g., <https://www.politico.com/news/2021/12/09/china-wto-20-years-524050>.

31 See e.g., Fergus Hunter et al., ‘Countering China’s Coercive Diplomacy’, *Australian Strategic Policy Institute*, February 2023, <https://www.aspi.org.au/report/countering-chinas-coercive-diplomacy>.

32 See <https://www.ft.com/content/ab456776-05b0-11e3-8ed5-00144feab7de>.

to South East Asia³³ and Australia.³⁴ Beijing often uses economic coercion for strategic goals in retaliation for perceived subjective insults in matters outside of the economy. Instead of transparent diplomatic dialogue, Beijing applies indirect retaliation to gain plausible deniability.³⁵ In effect, China exerts economic coercion for signalling and deterrence. By putting pressure on companies or sectors, Beijing tries to deter others from crossing red lines.³⁶

China's domestic determinants

In comparison to its international liberal counterparts, Beijing exercises a different logic in economy-related decision-making. In fact, these attitudes have existed since the economic opening-up in the early 1980s. Early on during the economic reform period, the view in Beijing was that China's rivals in the West could use economic dependencies to force the country into political reforms.³⁷ Effectively, Beijing's aim has been to create a relatively free domestic market, while maintaining a heavily controlled political and information system. The incumbent leadership, particularly President Xi, is the embodiment of this approach.

The current international system has served Beijing well, considering that most leading Western companies have entered into cooperation with China. This has brought about long-

term domestic growth stability and thus legitimacy for the Communist Party (CCP). Given that the US and the West have lost manufacturing to China, time appears to be on Beijing's side.

That said, Chinese tools to maintain high levels of growth appear to have become less effective. The domestic labour force is shrinking, and the population is ageing. Zero-Covid policies also hampered production, increased uncertainty, and reduced consumption. Regarding Chinese exports, there is an ongoing Western public discussion questioning the consumption of Chinese manufactured goods. What is more, high indebtedness overall hampers corporate profitability, as well as investment plans. In effect, debts tie up capital that might otherwise be used more efficiently.

Importantly, the property sector forms a large part of the overall domestic economy. It seems that no other sector can replace its overall contribution. Thus, Beijing seems unwilling or unable to correct the structural issues within the housing market, which suffers from excess supply and insufficient demand, as well as declining sales and investments. In fact, China seems to be moving towards a housing crisis: the markets appear to be over-leveraged, whereby the value of properties is overestimated, leading to high debt. As a result, and in addition to the economic consequences, the

33 Christina Lai, 'More than carrots and sticks: Economic statecraft and coercion in China–Taiwan relations from 2000 to 2019', *Politics*, vol. 42, no. 3 (2022): pp. 410–425.

34 See <https://www.abc.net.au/news/2020-12-17/australian-trade-tension-sanctions-china-growing-commodities/12984218>.

35 Ben Czapnik, Bryan Mercurio, 'The Use of Trade Coercion and China's Model of "Passive-Aggressive Legalism"', *Journal of International Economic Law*, Vol 26, Issue 2, (2023): 322–342, <https://doi.org/10.1093/jiel/jgac055>.

36 MERICS has identified more than 100 cases between 2010 and 2022. See <https://www.merics.org/en/report/fasten-your-seatbelts-how-manage-chinas-economic-coercion>.

37 Jukka Aukia, *China as a Hybrid Influencer: Non-state Actors as State Proxies*, Hybrid CoE Research Report 1, June 2021.

CCP would lose legitimacy both domestically and internationally.

There is, however, also room for caution. China's economic downfall has been predicted many times before, and Chinese officials have been able to resolve the respective issues up to now. Very recently, Beijing took measures to halt the collapse of the housing sector. Real estate investments are duly expected to increase again and support GDP growth, at least in the short to medium term.

All predictions are hampered by the fact that there is very little confirmed data from within China; while the growth of the Chinese economy is slowing down, China's GDP appears to be expanding at the same time, although the country's domestic consumption may have been fuelled by state-led investments rather than the growth of household wealth.³⁸ In any case, Beijing seems committed to polishing its GDP growth rates, which also makes any reforms difficult to implement.

At the same time, and perhaps for the above reasons, Beijing seems committed to its dual circulation strategy aimed at making China self-sufficient. In short, the goal is to strengthen the domestic market, insulate it against the rest of the world, and vertically integrate production in order to gain control of domestic manufacturers and suppliers of Chinese products and materials. Owning

and/or controlling a larger part of the value chain (e.g., owning mining and refining as well as production) and increasing the share of domestic high-end production aims at achieving self-reliance with the help of a large domestic market. Beijing also hopes that dual circulation will increase external demand and ensure market access to the Global South, for instance, in the context of the BRI.³⁹ The BRI appears at the same time to undergo some difficulties with China recording credit losses,⁴⁰ and it may be possible that new BRI branded projects are not launched going forward.

In any case, it would appear that China currently has few possibilities for decoupling from the West. However, the extent to which Beijing is willing to sacrifice its domestic economy in favour of political gains or its so-called core interests, including the Taiwan question,⁴¹ is unknown.

There are several considerations in this respect. Owning vast amounts of dollars is, first of all, beneficial for China, even though as a result the renminbi is not expected, at least in the short term, to overtake the dollar as the world currency. The Chinese economy also needs Western markets. Thus, the long-term goal of Beijing may be to achieve self-reliance in the sense of pre-emptively countering possible Western economic sanctions related, for instance, to a kinetic conflict with Taiwan.

38 For the problems with China's "Dual Circulation" economic model, see e.g., <https://www.ft.com/content/a9572b58-6e01-42c1-9771-2a36063a0036>.

39 See <https://www.bruegel.org/report/what-behind-chinas-dual-circulation-strategy>.

40 See <https://foreignpolicy.com/2023/02/13/china-belt-and-road-initiative-infrastructure-development-geopolitics/>.

41 "Core interests" of the CCP refer to issues not subject to negotiation and compromise, which justify the use of force. In addition to Taiwan, these include the South China Sea region, Hong Kong, Macau, and stability in Xinjiang and Tibet. See e.g., <https://strategicassessment.inss.org.il/en/articles/chinas-core-interests-and-the-rising-tension-with-the-united-states-implications-for-the-world-order/>.

However, for domestic reasons, there is currently little reason for Beijing to disrupt the global financial and economic system, given that Party legitimacy in China largely stems from the economic wellbeing of the middle class. What is more, dependencies in supply chains work both ways, and Chinese economic technology, for instance, is currently dependent on Western markets.

A related question concerns Western companies still operating in China, as it is puzzling why more companies are not exiting and re-shoring. In fact, the pace of foreign direct investments (FDI) to China has slowed and the market value has declined from peak years. At the same time, there have been outflows from China, even though these have remained relatively low. It would appear that companies have thus far maintained a certain degree of trust in China as a viable and stable economy and market.

More recently, European companies, especially in the Nordic countries and in Central and Eastern Europe, appear to have learned from the Russian invasion of Ukraine, and now seek to diversify away from China. However, despite all evidence to the contrary, Western companies in general seem to believe that Chinese officials, including Xi himself, will in due course correct their present mistakes in taking a hard line towards controlling the domestic economy and society at large. It is possible that wilful blindness exists on the part of Western investors and the portfolio management side. This is unlikely to change unless government policy changes in the West. Otherwise, capital will continue to be directed

into China's domestic market, where the currently declared Party priority is to re-stimulate domestic post-Covid growth.

International challenges for Beijing

Multiple international developments have complicated the growth of China's economic footprint. Russia's invasion of Ukraine, for example, ostensibly came at an inopportune time. This has, to a degree, changed the way in which some foreign investors view China, in that they may consider that it is not worth taking a risk in the midst of the turbulent political situation. In fact, the current situation may offer shortcuts around the wilful blindness of Western economic actors.

Regarding professional asset management, it is possible that investors will not seek as much growth out of performance as they have done in the past. Zero-Covid and wealth distribution policies have also meant that growth scenarios for China have decreased. Thus, the value proposition, namely the economic benefits or value that China as a market promises to deliver to current and future investors, no longer holds as much promise as during the earlier era of intense growth. Underperformance may consequently become a major issue, which could lead international investors to increasingly reject China.

Due to the structural domestic issues, looming decoupling, the Taiwan issue, trade conflicts in general, and the related political alignment with Russia, China now appears to have a very narrow window of opportunity to grow its economic influence internationally. In fact, Beijing is developing a digital currency (the e-yuan) as

well as an international cross-border payment system, the Cross-Border Interbank Payment System (CIPS), possibly as an alternative to Western financial systems.⁴²

Here, Beijing can be seen to have multiple objectives: 1) to export the Chinese payment system to the Global South thereby aligning these countries with Beijing, 2) to increase the global economic reach and power of China, and 3) to create means of insulating the Chinese economy against being cut off from the SWIFT system in the event of trade war escalation. For some countries, especially in the Global South, this could also mean that they would potentially be forced to accept RMB on an alternative platform.

Beijing is also calling for oil, traditionally traded in dollars, to be traded in Chinese yuan.⁴³ Although this has not materialized and markets are sceptical about this arrangement, a substitute currency could devalue the dollar and have an adverse effect on Western markets. The proposal is connected to Beijing's long-term goal to enhance the physical and digital yuan. In fact, Russia and China had previously agreed to trade energy in yuan and roubles instead of the dollar.⁴⁴

China currently has the highest foreign-exchange reserves in the world, more than double the amount of the runner-up,⁴⁵ as well as

owning the largest national debt globally.⁴⁶ In addition to energy, Beijing has also been hoarding food for many years. It is likely that China is building strategic buffers ahead of a future conflict and intensifying trade war. Recent energy imports from Russia to China, for example, have been high.

Considering that the US would be unlikely to accept partners aligning with China, the development of an alternative financial system would drive the building of two economic blocs, one US-led and the other China-led, constituting a fragmented global economy with the US, China and partners in their respective corners. In this scenario, the China bloc would not compare in terms of size. Given that the US bloc would be highly self-sufficient with better market demographics, at least in the short run, it is expected that this would favour the US. This will undoubtedly change in the long run, however, as population growth will strongly favour the market size of Asia and Africa, while the West will stagnate in comparison.⁴⁷

At the same time, it is likely that only a major disruptive event would force Beijing's hand in trying to decouple economically and/or financially from the West. The obvious worst-case scenario involves a kinetic conflict with Taiwan. The ensuing impact of such a scenario on the global economy would be severe, touching upon

42 However, it should be pointed out that CIPS and Western SWIFT, for instance, are not mutually exclusive.

SWIFT is a secure and efficient messaging system allowing banks to send and receive encrypted information, namely cross-border money transfer instructions, while CIPS is a "pipe" where money (currently only the yuan) flows. Banks moving money in CIPS currently use SWIFT for the most part in messaging the transactions.

43 See <https://www.wsj.com/articles/saudi-arabia-considers-accepting-yuan-instead-of-dollars-for-chinese-oil-sales-11647351541>.

44 See e.g., <https://www.newsweek.com/china-saudi-arabia-gulf-arab-states-gcc-opeac-america-dollar-oil-gas-energy-1766419>.

45 See <https://data.worldbank.org/indicator/FI.RES.TOTL.CD?locations=CN>.

46 See <https://hbr.org/2020/02/how-much-money-does-the-world-owe-china>.

47 See <https://ourworldindata.org/region-population-2100>.

investments, trade, and the financial system.⁴⁸ Of course, in the event of a kinetic conflict with Taiwan, instigated by China, it is likely that economic sanctions would be put in place by the West, thus initiating a wider economy-related grey-zone conflict, including cyberattacks, state-issued threats, as well as all the tools of economic statecraft, such as asset freezing, sanctions, and boycotts to name a few.

48 See <https://rhg.com/research/taiwan-economic-disruptions/>.

Trend 3: Challenges to energy supply and post-dependency vulnerabilities

Thus far, European states have been dependent on the Chinese markets and on Russian energy. The dependence on Russian energy and the openness of the European economic system have made the EU vulnerable to manipulation of demand and supply. This has been perceived as a threat to economic wellbeing but potentially more broadly to the socio-political stability of European states.

The vulnerabilities have mounted in the past few decades while cooperating with Russia to secure cheap energy for Europe to fuel economic growth. At the same time, due to climate change, public opinion has turned against certain types of energy sources, including fracking, that could have helped European countries in building energy resilience against dependencies on Russia.⁴⁹ In effect, resilience in the energy sector is created by securing multiple sources of energy at any given time. In this respect, not engaging in diversification sooner has made European leaders appear weak, although there have been major differences between EU countries on this as a common energy policy does not exist.

Russia has increasingly weaponized energy exports to increase the price of energy in Europe, thus pressuring acceptance of Russian demands in other issues, most evidently regarding the invasion of Ukraine. By way of illustration, in the autumn and winter of 2021, EU

officials cited restrained Russian gas supplies as one of the key reasons for rising energy prices in Europe.⁵⁰ The diminishing flow of Russian gas through Ukraine has been seen as an attempt by Moscow to force Germany to approve activation of the Nord Stream 2 gas pipeline.⁵¹

As a result of the ongoing war, volatility in the energy market has also increased. Under normal conditions, market mechanisms tend to function to mitigate price fluctuations and risks. In the current situation, however, the markets have become unpredictable. Given that investors and customers need to know that they can trust producers, unpredictable price fluctuations have become a major concern, which can have a considerable impact on all segments of the value chain. At the same time, national governments have taken steps to support businesses and households.⁵²

In 2016, OPEC formed the OPEC+ alliance to include other oil-producing nations as a response to falling crude oil prices.⁵³ Today, Russia, together with the OPEC+ formation, continues to manipulate global energy markets through price-supporting production cuts to crude oil.⁵⁴ This has been done despite calls for the group to pump more to lower fuel prices, thereby supporting the stability of the global economy. While this might be seen as a strategic move by Saudi Arabia to side with Russia, rather than supporting the US as its long-term

49 See <https://www.nature.com/articles/s41560-022-01178-4>.

50 See e.g., <https://www.consilium.europa.eu/en/policies/energy-prices-and-security-of-supply/>.

51 See e.g., <https://www.consilium.europa.eu/en/infographics/eu-measures-to-cut-down-energy-bills/>; and <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/natural-gas/110222-russian-gas-flows-to-europe-slide-further-in-october-fall-below-2-bcm>.

52 See <https://www.bruegel.org/dataset/national-policies-shield-consumers-rising-energy-prices>.

53 See <https://www.weforum.org/agenda/2022/11/oil-opec-energy-price/#:~:text=In%202016%2C%20OPEC%20formed%20an,shale%20oil%20production%20since%202011>.

54 See <https://edition.cnn.com/2023/04/02/business/opec-production-cuts/index.html>.

partner, a business rationale is likely at play rather than a shifting power balance in the Middle East.

What is more, while manipulating supply and demand is sensible from a business perspective, it is unlikely that Saudi Arabia would be siding with Moscow, given that Russia is often also seen as a non-religious and untrustworthy actor in the Middle East. That said, the behaviour of OPEC countries can be seen as strategic: Leaning towards Moscow will grant Saudi Arabia more negotiating power vis-à-vis the US. At the same time, from the Middle Eastern perspective, the Russian invasion of Ukraine appears less serious than the US invasions of Iraq, the destruction of Libya, and the Western coalition's withdrawal from Afghanistan.

For these reasons, Russia's active political messaging in the Middle East poses a continuous vulnerability to US and Western regional interests.⁵⁵ In a similar vein, due to structural issues, such as the use of the labour force, Western companies are not able to compete with their Chinese counterparts in investing in Middle Eastern oil fields, which gives Beijing an advantage.

Hence, an emerging trend sees challenges to the energy supply, along with the accelerating diversification of energy sources and the development of economic strategic autonomy due to the threat that Russia poses through the energy domain. The Russian invasion of Ukraine

has pushed European states to accelerate their diversification strategies, and the EU in general aims to switch to alternative supplies to make Europe independent from Russian energy.

The US has also taken steps in this direction, as evidenced for instance by the Inflation Reduction Act (IRA) and the new Security Strategy. The IRA includes \$500 billion in new spending and tax breaks that aim to boost clean energy, reduce healthcare costs, and increase tax revenues with nearly \$400 billion going to clean energy, with the goal of substantially lowering the nation's carbon emissions by the end of this decade.⁵⁶ The security strategy states that "the climate crisis is the existential challenge of our time" and highlights the importance of not being dependent on malign states (such as Russia) "that seek to weaponize energy for coercion".⁵⁷

Due to the invasion of Ukraine, sanctions against Russia and Belarus have been put in place. These aim at weakening the ability of Moscow to finance the war and specifically target the Russian political, military, and economic elite, albeit with varying degrees of success, at least in the short term.⁵⁸

The green energy transition can be seen as a post-dependency vulnerability, with the transition acquiring added urgency due to the attack on Ukraine. It now appears evident that the liberal West needs to move away from hydrocarbons more rapidly than anticipated, which

55 See e.g., <https://www.dw.com/en/russia-is-winning-the-information-war-in-the-middle-east/a-62900269>; and <https://spravdi.gov.ua/en/russian-propaganda-in-the-middle-east-what-narratives-the-kremlin-spreads-in-turkey-and-egypt/>; and <https://www.wilsoncenter.org/publication/report-russia-middle-east-national-security-challenges-united-states-and-israel-biden>.

56 See e.g., <https://www.whitehouse.gov/cleanenergy/inflation-reduction-act-guidebook/>.

57 See e.g., <https://www.whitehouse.gov/briefing-room/statements-releases/2022/10/12/fact-sheet-the-biden-harris-administrations-national-security-strategy/>.

58 See e.g., <https://www.consilium.europa.eu/en/infographics/impact-sanctions-russian-economy/>.

will pose challenges and prompt growing pains. Unanswered questions revolve around what the replacements for oil and gas will be, and the threats that their replacements will pose, as well as the significant role that China will play in the future green transition.

Trend 4: Challenges to critical infrastructure and open market principles

Critical infrastructure (CI) creates key vulnerabilities for Western-style societies and has increasingly come under threat. The Nord Stream sabotage is perhaps the best-known recent example, but there have been multiple cases where CI has been sabotaged, for example in Norway, the UK, France, and Germany.⁵⁹

China's Belt and Road Initiative (BRI) and Made in China 2025 are good examples of how economic statecraft can be used, on the one hand, for economic development, and for securing China's own trade routes and presence on the other (see Table 1 for their main elements). Chinese port/transport companies already control key ports such as Rotterdam in the Netherlands, Piraeus in Greece, and parts of the port of Hamburg in Germany, as well as close to 40 ports on the Atlantic and Mediterranean coasts of Africa.⁶⁰ At the same time, it is possible that China is approaching a critical point with the BRI and Made in China 2025 with regard to committed resources versus actual results.

That said, the ability of a hostile external actor to acquire private ownership of critical properties is a considerable and well-known vulnerability for liberal democracies. Such vulnerabilities range from real estate acquired in the vicinity of strategic infrastructure to ownership in the finance sector, or stakeholders in high-tech companies. This is a particular cause for concern when it comes to countries neighbouring Russia, for instance. Russian companies are known to take advantage of open markets through third-party actors to gain ownership of

land near critical infrastructure. Chinese state or near-state actors, on the other hand, have shown willingness to acquire a stake in Western companies operating in areas that can increase the competitive advantage or military power of China.

This activity poses a direct external threat via a malign actor exploiting a vulnerability presented by open markets. At the same time, an indirect and internal economic threat is posed by the democratic state intervening in open markets – more than necessary – due to national security. This potentially violates the basic principles of liberal market economies, and possibly limits the functioning of the market, duly introducing market insecurities. In other words, as a side effect of the malign actor focusing on critical infrastructure, this activity hampers the free functioning of market economies in liberal democracies, thereby posing threats both directly and indirectly.

In effect, the connection between a freely functioning market economy and democracy is a key aspect when discussing economy-related malign influence. Given that a freely functioning market economy is – to an extent – still seen as more important than state intervention or oversight in the EU, for instance, the free functioning of the economy as an argument may affect opinion-makers and decision-makers alike. They may be inclined to argue that state intervention has a categorically negative impact. As a result, free markets as a standalone argument decoupled from national security may indirectly

59 See e.g., <https://www.wired.com/story/france-paris-internet-cable-cuts-attack/>; and <https://www.bloomberg.com/news/articles/2022-11-18/nord-stream-explosions-were-caused-by-sabotage-sweden-concludes>; and <https://www.npr.org/2022/10/09/1127739900/germany-trains-sabotage>; and <https://www.npr.org/sections/thetwo-way/2014/02/05/272015606/sniper-attack-on-calif-power-station-raises-terrorism-fears>; and <https://www.washingtonpost.com/nation/2022/12/04/moore-county-nc-power-outage/>.

60 See https://www.nbr.org/wp-content/uploads/pdfs/publications/sr98_inroadsandoutposts_may2022.pdf.

Table 1. Key features of China's BRI and Made in China 2025 initiativesKey elements of the *Belt and Road Initiative* and *Made in China 2025*

Belt and Road Initiative	Made in China 2025
<p>China's Belt and Road Initiative (BRI) is a strategy that aims to connect Asia, Africa and Europe via land and maritime networks in order to increase integration, trade and economic growth.</p> <p>Key priority areas of the BRI are:</p> <ul style="list-style-type: none"> • Policy coordination; • Infrastructure connectivity; • Unimpeded trade; • Financial integration; • Connecting people. <p>The main and most visible components of the initiative involve large investments in infrastructure such as ports, roads, railways and airports, power plants and telecommunications.</p> <p>The BRI is an increasingly important umbrella mechanism for China's bilateral trade with BRI partners. As of March 2022, a total of 148 countries have joined the BRI.</p>	<p>Made in China 2025 (MIC25) is designed to put China on a new path to industrialization, with greater emphasis on innovation, expanded use of new-generation information technology, intelligent manufacturing, consolidation of the industrial base, integration of industrial processes and systems, and a robust multilayer talent development structure.</p> <p>MIC25 is part of a three-step strategy aiming to make China a global manufacturing powerhouse, moving the country away from its perceived position as a low-end manufacturer to a high-end producer. The strategy centres on three pillars:</p> <ol style="list-style-type: none"> 1. Shifting China from a big manufacturing country to a strong one by 2025. 2. China being able to compete with developed manufacturing powers by 2035, reaching the middle level of the world's manufacturing powers. 3. Transforming China into a leading manufacturing power by 2049.

hamper the functioning of such key tools as the EU's foreign direct investment screening mechanism or the anti-coercion instrument.

In addition to investment screening, export control creates another major tool for liberal market economies that potentially hampers the basic principles of open market economies. A recent example saw the US banning the sale of semiconductors and chipmaking equipment to China.⁶¹ This is expected to jeopardize the very existence of the Chinese chip industry. Washington appears to be aware that the CCP does not want China to be a low-tech, but rather a

high-tech and AI surveillance manufacturing country. In fact, this move was a significant event for the global economy and might be compared by some with the oil embargo against Japan in 1941, a major contributing factor in Japan waging war against the US. Considering its significance, mainstream international news coverage of the announcement was relatively muted, reflecting the remaining market's ambition to continue engaging openly with China.⁶²

It remains to be seen how markets react to this development,⁶³ and it is to an extent unclear what actions China can or will take.

61 See e.g., <https://www.bloomberg.com/news/articles/2022-10-03/us-to-announce-new-limits-on-chip-technology-exports-to-china>.

62 For example, most of the Western financial press appeared complacent. Bloomberg, for instance, while trying to sell terminals to China, had no press coverage of the US move.

63 It is considered likely that the CCP elite themselves may have toned down the reactions of the Chinese state media. During important events, all destabilizing news is seen as a threat. Therefore, any official reactions or responses to the Biden announcement from the CCP are yet to be seen.

On the US side, there have been substantial strains in international trade since the Trump administration. The Biden administration is continuing and, in some cases, strengthening these policies. Although a tit-for-tat trade war may not be the most likely option (given that the global market is striving to work its way out of recession), this cannot be ruled out.

In any case, tensions are high in many areas; the US has implemented the Chips and Science Act, China has stronger restrictions on FDI than both the EU and the US, the Phase One agreement has eased trade in some respects, while both US and Chinese tariffs remain high. Although the Chips and Science Act has mainly attracted attention as a means of limiting China's access to semiconductor technology, its official aim is to support the US semiconductor industry, Science, Technology, Engineering, and Mathematics (STEM) capacity, and R&D by providing \$280 billion in new funding.⁶⁴ On the other hand, the Phase One agreement mainly focuses on trade between China and the US and aims at prohibiting China from using market access as a way to force foreign companies to transfer technology.⁶⁵

These developments pose a clear vulnerability to the global economy and can easily spill over to other domains. The green transition, for instance, is a potential sector for Beijing to

exploit and use in trade wars. The worst-case scenario includes an invasion of Taiwan, which would almost certainly hamper the functioning of a large part of the global supply chains, as well as increase the use of the full economic statecraft arsenal.⁶⁶

However, Beijing is likely to keep the option of trade, investment, and industrial policy responses open, while being content with blaming the US and with building economic buffers, and developing security through reinforcing ideology domestically.

Western liberal societies should note that democracy and national security need to go hand in hand and should be considered together with a liberal and open economy as a way forward. This will create possibilities for state intervention where and when needed, for example in the case of the EU's anti-coercion instrument.⁶⁷

Open markets and the complexity of financial markets

Another critical dimension in the proper functioning of open markets is the finance sector. The 2008 mortgage crisis is a case in point. At the time, a relatively trivial asset class⁶⁸ (a grouping of investments subject to the same regulations and laws) caused a shock in the markets that nearly resulted in the US and EU

64 See <https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/09/fact-sheet-chips-and-science-act-will-lower-costs-create-jobs-strengthen-supply-chains-and-counter-china/>.

65 See <https://www.fas.usda.gov/topics/china-phase-one-agreement>.

66 See https://www.globalasia.org/v17no4/cover/the-new-reality-of-economic-statecraft_vinod-k-aggarwal-and-rew-w-reddie.

67 See https://ec.europa.eu/commission/presscorner/detail/en/ip_21_6642.

68 The financial crisis of 2008 was fuelled by cheap loans and bad lending standards. The access to cheap money created a housing bubble and when that bubble burst, a large number of financial institutions were left with enormous investments in subprime mortgages, resulting in large-scale defaults in the banking sector and grave consequences for whole nations.

economies running out of liquid assets, namely cash. In other words, without state intervention, banks were on the verge of collapse and the interbank lending market almost froze. However, the public continued to have access to their deposits and cash thanks to existing safety nets (such as deposit insurance), further backed by state interventions.⁶⁹

The key to putting the 2008 crisis into perspective in the current situation, however, lies in understanding that an open financial system is infinitely complex.⁷⁰ In fact, no single authority can monitor the totality of the system, only their small respective parts. Thus, in 2008 when the crisis hit, no single authority understood the major consequences and cascading results. In effect, high-risk assets were sold in packages and, importantly, across jurisdictions, undermining the possibility of any one governing body having a clear understanding of the events.

Given that financial authorities operate under strict regulations and only share data as legally required, there is minimal interaction between different authorities. Important work has been done in this regard in the international cooperative bodies for financial supervision, such as the Basel Committee for Banking Supervision and the Financial Stability Board. A very large or volatile asset class that no one monitors can, nonetheless, pose simultaneous risks in different global capitals and financial hubs from London to Tokyo. The difficulties that central banks and supervisory authorities face in monitoring

risks related to certain transnational financial instruments present worrisome opportunities for threat-building, which ideally should be monitored closely.

For a foreign state actor, it might be possible to create a liquidity crisis in Western liberal democracies. Upsetting an asset class similar to the one in 2008, and via a simultaneous cyberattack to poison bank accounts, would be a potential tool. The utilization of such a tool, however, would require the right conditions. A financial instrument would be triggered at a time of heightened political or geopolitical tension. Thus, the usage of the instrument would aim at amplifying an ongoing crisis, and only when it was triggered would damage take place.

For these reasons, the principles of openness in the financial sector have the potential to create vulnerabilities, whereby the key question is how to gain better insights into the functioning of the markets. The system is infinitely complex across different states and jurisdictions, and how best to monitor the overall system remains a dilemma. By way of illustration, when the largest corporate banks report to central banks, that data is usually under copyright law, and thus cannot be used to monitor the system, for example by regulators in different countries.

What is more, concerns about a major cyber-attack against commercial banks are on the rise,⁷¹ and due to the interconnectivity of the financial sector, such an attack might cause a grave situation. Loss of trust in the financial

69 While the “weaponization” of the financial markets and financial instruments by an outside actor constitutes a threat potential, the building of a credible risk scenario would require discussing potential interim steps and critical details, and providing a careful account of the facts in 2008, which all fall outside the scope of this report.

70 For details on the 2008 financial crisis, see e.g., https://www.princeton.edu/~markus/research/papers/liquidity_credit_crunch.pdf.

71 See <https://www.bankofengland.co.uk/systemic-risk-survey/2022/2022-h2>.

system would affect banks and could potentially lead to the insolvency of financial institutions. Although central bank interventions would be certain, these would only take place after the incidents. These types of concerns have spurred national authorities to bolster the resilience of their financial systems, to ensure access to accounts and the availability of cash, and to secure digital and card payments.⁷²

Another critical dimension in the resilience of the financial system is its digital resource management, such as cloud service capacity and processes. Here, a pertinent question concerns how private actors, such as Amazon, Google, and Microsoft, would prioritize their services in the event of a crisis. In other words, who would be given priority and what mechanisms do states have in place to interact with these critical operators? When the demand for services is high, then the prioritization of services becomes critical, overriding open market principles.

In a situation of politically heightened tensions, a malign actor is likely to exploit a weakness as a response. For instance, by firstly creating a liquidity crisis, and subsequently launching a cyberattack when the financial system is running out of liquidity, a malign actor would aim to cause public distress and thus inhibit political decision-making and public trust. For the above reasons, formulating a crisis response that takes these potential developments into consideration is critical, especially from the point of view of the financial system.

Vulnerable immaterial infrastructure and assets, intellectual properties, and knowledge security

The increasing digitalization of the economy creates potential vulnerabilities in multiple ways. The digital infrastructure, including the economy, is more open to cyberattacks that potentially aim to disrupt or are part of espionage. While the state (through critical infrastructure) and households and companies (through daily operations) are increasingly influenced by digitalization, they continue to be inadequately prepared for these threats.

First, cyberattacks against critical infrastructure such as energy networks, water distribution or digitalized logistics systems can have massive consequences. Second, as financial trade and payment systems operate in digital networks, they are vulnerable to severe disruptions. This includes immaterial infrastructure ranging from onsite data storage and processing to different standards that can be used for malign activity. Third, as working life (e.g., remote work, meetings) becomes increasingly virtual, it is easier to record and monitor, potentially leading to faster leakage of confidential and secure information. Fourth, as all communication becomes more digital, communication platforms such as social media increasingly enable well-targeted political manipulation or other campaigns, even at an individual level.

Both China and Russia are increasingly intent upon gaining an information edge over Western democracies.⁷³ This is accomplished by targeting technology, innovation, research and

⁷² See e.g., the Digital Operational Resilience Act, the Critical Infrastructure Resilience Act, and the Network and Information Security Directive (NIS2) of the EU.

⁷³ See e.g., <https://www.delta.tudelft.nl/article/aivd-china-biggest-threat-knowledge-security>.

development, research agencies, and intellectual property rights in liberal market economies. China also has an interest in influencing the economic systemic environment (devices, info stack, network, apps, content).⁷⁴ While Russia has been active in more overtly hostile actions, albeit difficult to attribute, both during and before its invasion of Ukraine, China has chosen more covert actions, focusing on the acquisition of immaterial assets in the information space.⁷⁵

What is more, an “all-encompassing national security mindset” is increasingly permeating all levels of the Chinese state and society. The Party has effectively turned national security into a key paradigm. State officials, as well as citizens, are co-opted to be alert to potential threats, whereby Chinese companies and businesspeople are urged to become intelligence gatherers.⁷⁶

In fact, recent studies have found China to be in the lead in several technology domains,⁷⁷ while the general perception remains that China faces obstacles as domestic structures do not support innovation. Even if China’s newly acquired lead is likely fuelled by emulating and stealing instead

of innovation advances, China is challenging the competitive advantage of the West.

That said, the general acquisition of technologies, know-how, and strategic capabilities through different types of investments by non-democracies, such as China, builds strategic-level threats for Western democracies. What is more, these actors may use domestic or international regulations to their benefit, as is the case with security laws in China that require foreign firms to submit technology to the Chinese government for a national security review. These methods could be said to constitute economic espionage. In any case, they are used to gain economic leverage and a competitive advantage in terms of national security, or trade in general.

There is also an accelerating race between China and the US-led transatlantic coalition for supremacy in artificial intelligence and other emerging and disruptive technologies, such as quantum computing and big data.⁷⁸ Supremacy in these technologies would confer an advantage, but they can also increase susceptibility to malign activity as they enhance interconnectedness between the physical and virtual domains.⁷⁹

74 See <https://securingdemocracy.gmfus.org/china-digital-stack/>.

75 See https://www.hybridcoe.fi/wp-content/uploads/2020/07/20200625_Strategic-Analysis_23_China_Web.pdf.

76 See e.g., <https://www.merics.org/en/report/comprehensive-national-security-unleashed-how-xis-approach-shapes-chinas-policies-home-and>.

77 According to the Australian Strategic Policy Institute, China has a leading position when it comes to 37 out of 44 technologies: <https://www.aspi.org.au/report/critical-technology-tracker>.

78 For instance, the vision of the Defense Innovation Accelerator for the North Atlantic (DIANA) is to “provide deep tech and dual-use innovators with access to NATO resources including grant funding, accelerator programming, and pathways to adapt their solutions for defense and security needs”. See <https://www.diana.nato.int/>. According to a 2022 statement, “NATO’s Innovation Fund will invest 1 billion euros in early-stage start-ups and other venture capital funds developing dual-use emerging technologies of priority to NATO”. See https://www.nato.int/cps/en/natohq/news_197494.htm; https://www.nato.int/cps/en/natohq/news_210393.htm.

79 This is related to knowledge security, dual use, and research collaboration. See e.g., <https://unitracker.aspi.org.au>; <https://corporate.dw.com/en/chinese-military-made-in-germany-how-chinas-military-uses-knowledge-from-joint-research-with-german-universities/a-61845742>.

Trend 5: Challenges to supply chains

Global supply chains are currently volatile and lacking in resilience. Even before the outbreak of Covid-19, some signs of re-shoring could be observed, and the pandemic served to reinforce public discourses calling for pulling back operations from offshoring countries. Overall, however, evidence of re-shoring (or ally-/friend-shoring or fragmentation) remains limited. In fact, this would lead to higher costs, but is hoped to result in greater supply chain security and hence lower risks. Risks on the supply side include rare earth elements (REE) that are vital for the green transition, commodities that can easily be instrumentalized, such as grain,⁸⁰ and access to energy.

A similar concern relates to robustness; due to Covid-19, supply chain networks within closer geographical and jurisdictional proximity may grow. The international trade system is also likely to self-adjust and coordinate supply chains according to principles that have long traditions and that foster an optimization culture. With the benefits of hindsight with regard to the effects of the pandemic, most supply chain arrangements are being optimized accordingly.

Supply chains have been designed to minimize production costs and optimize just-in-time deliveries, which have been shown to contribute to their vulnerabilities. This was clearly visible during the pandemic, although this situation has now stabilized.⁸¹ As a result of these vulnerabilities, Western democracies inevitably need to bolster their strategic autonomy, which includes ensuring supply chain diversity and robustness or, in some cases, self-supply. One of the most

pressing issues related to supply chains remains precisely pinpointing where the threat emerges within the chains and, concurrently, who should be responsible for a response, both within individual nation states as well as more broadly internationally.

Non-military supply chains

Due to the directly related national security relevance, supply chains concerning military products and materials are often secured and arranged in a robust fashion. This has not been the case when it comes to products and materials that do not have a direct national security implication. In the case of semiconductors, for instance, vulnerabilities are related to critical minerals, where China plays a key role, as mentioned previously. The same can be said of the battery production supply chain, a key component of the green transition, where China has a dominant position.⁸²

It would appear, however, that the supply of critical minerals is not the sole issue. Instead, a key question concerns how consistently supply chains allow developers access to critical minerals. Repairing supply chain deficiencies is ultimately connected to a better understanding of the industry as a whole.

Another example of a critical but vulnerable non-military supply chain concerns pharmaceuticals. China and India are important exporters of pharmaceuticals, although it appears that no authority in the West has a comprehensive understanding of the related supply chains. Food security is yet another example; while foodstuffs are relatively easy to manufacture,

80 See e.g., <https://www.world-grain.com/articles/17412-russian-wheat-exports-sluggish>.

81 See <https://www.newyorkfed.org/research/policy/gscpi#/interactive>.

82 See <https://iea.blob.core.windows.net/assets/4eb8c252-76b1-4710-8f5e-867e751c8dda/GlobalSupplyChain-sofEVbatteries.pdf>.

the process involves difficult risk management, as has become evident since Russia's invasion of Ukraine. Furthermore, while money does not form any supply chains per se, finances allow supply chains to function, and are thus important in understanding related vulnerabilities. Having a clear assessment of how finances enable the functioning of any supply chain should therefore lead to a better understanding of related vulnerabilities.

The current non-transparency of these supply chains, and the consequent lack of understanding with regard to their complexity, can duly be considered a key dilemma. Within the chain, every individual actor makes their own rational decision concerning suppliers, leading to complexity whereby no one has a clear understanding of the overall situation. For example, from the perspective of the EU, a product imported from the US may include parts that have been manufactured in China. They may also contain raw materials produced in China and embody Chinese engineering as well as design work. Complexities also vary from sector to sector and company to company: multinational companies (MNC) may manufacture goods in China either for local mainland markets, for Chinese exporters, or for exporting internationally under their own brand.⁸³ This results in unpredictability in the event of disruptions. Thus, further significant issues include understanding exactly where clarity is needed within the chain, what actions are needed to achieve this, as well as what should be considered the highest priority from the overall security perspective.

In assessing supply chain vulnerabilities, import and export ordinances are vital. However, the scope of details is not considered sufficient to unravel vulnerabilities, given that import/export control does not reach what could be called the component level. Thus, lack of transparency primarily stems from the individual company level, which poses a key dilemma. Companies need to be incentivized to report supply chain issues. Often, however, unnecessary bureaucracy and an increased workload deter individual companies from reporting. A successful assessment of details would also require analysis at the sector-to-sector level.

An analysis at the sector-to-sector level would, in turn, need to involve trade organizations, as well as the government; industry details would need to be recognized as national security issues regarding supply chains. In fact, the realization that industry-level details are needed to combat supply chain vulnerabilities should provide incentives to bring actors together from different sectors. Here, the state should provide both carrots and sticks in terms of incentives and the potential for regulation. Possible collaboration between state and non-state actors should start with a dialogue, given the difficulties in taking the first step.

The role of China and Russia

Clearly, the size of the Chinese economy makes Beijing the key concern when discussing supply chain security: Beijing's potential to instrumentalize global supply chains is real. While China has inevitably become a crucial part of any supply chain, it is unlikely that this has been

83 See <https://deloitte.wsj.com/articles/china-dispatch-complexities-of-decoupling-supply-chains-7c743ae>.

planned by Beijing. Nonetheless, this places China in a position to exploit supply chains. In other words, while it is not necessarily Beijing's clear strategy to create dependencies, the impact remains the same.

In fact, EU-level dependencies on China are quite high in the case of certain central products. For example, approximately 70% of mobile phones and 92% of laptops imported from outside the EU come from China. The EU is highly dependent on Chinese imports for electric toasters (96%), reciprocating piston engines (97%), escalators and moving walkways (96%), and radios (95%). What is more, these imports are very difficult to replace with imports from other regions.⁸⁴

A triggering event prompting China to instrumentalize supply chain vulnerabilities would most likely involve Taiwan. In a conflict involving Western allies, economic sanctions against China would likely be put in place. While trade would not come to a complete halt (as has been demonstrated despite sanctions against Russia), it is possible that China would not be able to sustain an independent domestic economy without a high level of exports. At the same time, China possesses by far the largest currency reserves, has a very strong international investment position, effectively no foreign

debt, and a ratio of exports to GDP that has constantly decreased. In effect, China would be able to absorb damage if its exports were to dramatically decrease.

Thus, Beijing would likely firstly calculate that China can absorb damage and last longer than the Western allies. Beijing would likely also try to sow division between the US and the EU by disrupting supply chains. The aim would be to create an economic conflict more severe than the conflict over Taiwan. For some EU countries, for instance, access to critical minerals can be expected to be more important than the independence of Taiwan.

A trade conflict involving China and the EU would therefore inevitably be more severe than in the case of Russia's invasion of Ukraine (the weaponization of energy by Russia or threats to instrumentalize the grain supply). In this scenario, a trade war is unlikely to take place first. Should the conflict persist, a trade war or similar economic escalation is anticipated to take place. Given the global supply chain complexities, the key difference between Russia and China is that Beijing can wage a trade war without Moscow, but not vice versa. A trade war with China would be considerably more complicated and costly for both the EU and the US due to China's involvement in all supply chains.

84 See <https://publications.bof.fi/handle/10024/52709>.

Conclusions and outlook

While many Western market economies have relatively weak instruments in place for state intervention, these are currently being strengthened. In fact, EU and NATO countries have woken up to the geopolitical challenges, and to the necessary changes to regulatory requirements respectively. In particular, the rise of China as a growing major actor in the digital economy has prompted the West to improve cybersecurity and the preparedness of critical economic institutions. The Russian invasion of Ukraine is seemingly strengthening this trend of enhanced preparedness as Western states are expecting Russia, together with China, to use cyber means against their economies.⁸⁵ In any case, a possible trade war would severely affect prices, investments, and employment globally.

Building systemic resilience for democracies

Given that national economies are more agile when it comes to responding in comparison to international bodies, an approach to countering Western dependencies on China would be to support the agency of individual countries to push back in a self-governing or autonomic way. This, however, would firstly require sharing situational awareness regarding the risks of Chinese economic cooperation and the Chinese use of economic coercive actions. If this situational

awareness could be shared broadly, it could potentially create a successful counter-narrative with regard to China.

However, it should be noted, for instance, that while the EU is currently well established, its organization is rigid and decision-making complex. Thus, individual nation-level approaches are vital. Individual countries are more prone to coercion compared to the EU for instance, but recognizing vulnerabilities is easier, potentially leading to more efficient measures.

Potential democratic responses should include:

1) Strengthening economic security: The EU has put an investment screening mechanism in place, but it is likely that China is using alternative means to access critical technology, including dual-use approaches between the People's Liberation Army and private actors, as evidenced through academic collaboration.⁸⁶ In addition to screening investments from China, there is increasing resolve, especially in the US,⁸⁷ to bolster investment screening towards China. In the same manner, dual-use companies that are investing in China, or partnering in joint ventures, should be placed under case-by-case scrutiny. While different levels of economic security are being ramped up, not all liberal economies are developing measures in tandem and in a coordinated fashion.⁸⁸

85 For general economic security measures and resilience-building, see <https://merics.org/en/report/opportunity-risk-changing-economic-security-policies-vis-vis-china>.

86 See <https://www.ftm.eu/chinascienceinvestigation>.

87 See <https://www.whitehouse.gov/briefing-room/presidential-actions/2022/09/15/executive-order-on-en-suring-robust-consideration-of-evolving-national-security-risks-by-the-committee-on-foreign-investment-in-the-united-states/>.

88 Economic security elements include inbound/outbound investments, export controls, and supply chain security.

2) Securing supply chains: The burning question regarding supply chains is how to proceed in alleviating vulnerabilities. First and foremost, it should be understood that China is in a position to coerce. Moving on from there, regarding the public sector, incentives would need to be put in place for companies that represent critical fields to seek production without China. For example, a large proportion of pharmaceutical supply chains involve China. There is little reason to think that China would continue to export antibiotics, for instance, if a conflict were to break out. Therefore, undertaking the required analysis to pinpoint weaknesses and alternative supply sources would be a logical first step.

That said, onshoring or friend-shoring are difficult given the high production costs involved. Thus, regional partnerships that can create advantages are needed. This, however, is a broader political issue involving questions such as whether it is relevant or realistic to aim at forming a defence alliance equal to NATO that deals with commerce. Here, initial steps should include the identification of a shared situational awareness and a sustainable vision of the future. Regulatory measures or incentives within the global trade framework might also be evaluated. Enhancing EU-US cooperation is a critical first step.

The fundamental question appears to be whether to sacrifice economic growth for the sake of stability, security, and lower vulnerability. However, given that security is a collective good, instead of “growth versus stability”, the relevant juxtaposition should include discussions on “individual versus collective”. This

means that a more secure supply chain is ultimately going to be a more productive one, while not presenting a vulnerability. Therefore, it can be argued that a more secure supply chain would be better due to its more robust market position. This means that in creating security for supply chains, the cost should be seen as an upfront one.

3) Building resilience in the financial system:

Regarding the threat potential of financial instruments, it is to an extent unclear what the best practices are in terms of response. Data-sharing between different authorities would be important, but this faces structural dilemmas, for instance in the form of data-sharing between the public and private sectors, as well as between authorities from different countries. While more intrusive monitoring is likely to prevent shocks, resilience-building and knowing how to respond are crucial. Knowledge and understanding with regard to the specific nature of transnational assets, including exercises on how to globally react to financial shocks, should be developed. The further development of EU-UK-US cooperation in this field is important.

However, it is largely a political question as to whether the financial system should be made more resilient. An argument can be made that the more resilient a financial market is, the less it contributes to the overall economy. This is the trade-off between security and open markets. What kind of cost is acceptable will ultimately depend on the circumstances.

Know-how when it comes to conducting trade, investments, and R&D collaboration,

and knowledge of how the capital and currency markets function is critical, especially in a more escalated conflict situation.

4) Securing high-tech: AI, big data, and other applications of high-tech are key products when it comes to the challenge that China poses. This includes dual-use purposes between civilian and military sectors. High-tech dependencies could also create major vulnerabilities in the future. Thus, the increase in R&D spending, and concurrently the knowledge security of R&D, should be seen as crucial in the West, and need to be secured at the same time.

A bloc of like-minded economies

Regarding Western dependencies on China, there is a small but growing consensus on envisioning the West as a coherent unity. This thinking includes the idea of the need to form alliances, in a political but also an economic sense. These would primarily function to seek distance from the current WTO, which appears to be powerless for the most part in controlling the unilateral actions of Beijing.

The aim of a so-called Western-led bloc would be re-shoring and thus limiting China's access to strategic assets. Another key aim would concern re-engaging with the Global South, where the China model is now working well for Beijing. In fact, the current Western hegemony is not conducive to cooperation regarding the Global South.⁸⁹

Should an economic alliance be formed involving like-minded countries, one potential

model could include certain European and Asian countries, such as Sweden, Germany, Japan, and South Korea, producing high-end products like software, whereas low-end products and manufacturing could be performed in countries such as Mexico and Vietnam. In this context, an interesting question would concern the role of the EU's common trade policy. Are individual EU countries able to take on such a role and what position would the EU take? At the same time, China is also increasing its economic footprint in developing economies that the West has traditionally seen as allies.⁹⁰

This type of holistic system and community of like-minded economies would help to reduce China's influence or, in a best-case scenario, bypass China altogether. But the approach is clearly not without its problems. Such a bloc would require the community to be indifferent to the political system of the respective countries. For this reason, the mechanism could be called friend-shoring and not re-shoring. This would mean "friendship" in terms of economy, but not necessarily politics in the sense that the community would only include democracies. Ideally, the system would share all finance, production, supply chains, and consumer markets, or simply some aspects, such as supply chains. Essentially, this arrangement would create strategic autonomy from Russia and China. In addition to opening the political aperture and increasing opportunities for influencing the political development, such an approach would also strengthen US-EU-UK ties, considering that the EU would be given a relevant role.

⁸⁹ It could be speculated that international investors, for instance, might be more inclined to make long-term investments in software (e.g., in India) but not in production and hardware (e.g., in Africa), especially in the Global South. This is possibly due to risk management, that is, easier exit, revenue ratios, and the like.

⁹⁰ See e.g., Chinese FDI into Mexico, <https://prosperousamerica.org/chinese-companies-build-factories-in-mexico-to-exploit-friendshoring/>, and Vietnam, <https://country.eiu.com/article.aspx?articleid=1142542897&Country=Vietnam&topic=Politics&subtopic=Forecast&subsubtopic=International+relations&oid=632512846>.

The broad question concerns how such a coalition could be built. How would one go about embarking on a dialogue with relevant stakeholders, including bringing in the business sector? US companies, for example, may not see the benefits of engaging in broader, but restricting, multilateral political cooperation. Large Western companies, in principle, oppose slave labour bills against China, but when bills hamper core businesses, these companies have often chosen more cost-effective authoritarian countries.

Any type of initiative would ultimately require the leadership of the US, which may not be well-suited to developing a unified economic posture. Here, the dilemma concerns the current US financial culture, which largely focuses on short- not long-term developmental aspects. These issues are in direct contrast to the US military and its global strategies, which focus more on long-term coordination relative to industrial, monetary, and fiscal strategies. For this reason, the US may not be best placed to take this type of initiative.

Another key question concerns the idea of a trade bloc in general. Is the West willing and able to return to a type of neomercantilism in a modern post-Cold War setting? This to an extent means that a state or group of states encourages exports, discourages imports, controls capital movement, and centralizes currency decisions in a central government. Therefore, it seems relevant to ask what risks are included in a neomercantilist situation. On the other hand, Beijing is already engaged in a form of neomercantilism, sanctioned for instance by the World Economic Forum in promoting Chinese narratives and a Chinese agenda.⁹¹

An obvious response would be to build a coalition that is too broad for China to interfere with. One way forward would be to develop a network of like-minded economies instead of a monolith or a grand strategy. At the country level, both Australia and Lithuania, which have suffered under Beijing's economic coercion, are now developing a policy to decouple from China. Thus, an argument can be made that Russia's war in Ukraine has helped in combatting the wilful blindness of the economic domain; as expected, a kinetic conflict has the potential to change policy in a rapid fashion. This can also be observed in more conservative and cautious countries such as Germany.

A liberal whole-of-society approach

For most Western democracies, including the business sector, a whole-of-society approach would be *terra incognita* in that, often, a democratic central state has not engaged with the business sector to the extent that China has mobilized its local economy to further the CCP agenda. To place this dilemma in context, among Western allies, even the Cold War did not require large-scale coordination between the non-state and business sectors in the way that responding to the current challenge posed by China does. Effectively, the CCP has co-opted the whole of China's non-state sector to serve the Party agenda, including the economic domain.

Logical ways forward include agreeing on initial steps that the business sector can accept. However, given that only a few Western states maintain a large-scale dialogue with the business sector, this presents a new dilemma with no quick or easy solutions. Some Western

⁹¹ See e.g., *Global Times*, <https://www.globaltimes.cn/page/202108/1230523.shtml>; *Fox News*, <https://www.foxnews.com/world/world-economic-forum-chair-klaus-schwab-declares-chinese-state-tv-china-model-many-nations>.

states, such as France and the Nordic states, are already cooperating closely with the business sector. The development of a Western whole-of-society approach, which would have the capacity to respond to China's co-opting of the non-state sector, would present a long-term policy challenge, where the Nordic states could provide best practices.

In general, primary questions concern developing a common risk assessment and building situational awareness and crisis preparedness. Here, the capabilities of the state sector to cooperate with the business sector regarding China are important. In this vein, a sectoral and company-level cost-benefit analysis could be used to determine whether any level of decoupling could be achievable, in whatever manner that might be defined.⁹²

For the business sector to remain productive in the long term, there would need to be more investment in the supply side, which could be encouraged by a coordinated investment stimulus from the state sector. At present, it is estimated that there is insufficient Western investment in the supply and physical side of production. State actors would therefore need to start providing an investment stimulus to bring investment back to the actual economy. However, it is expected that it will take decades to change Western infrastructure, including onshoring.⁹³

Understandably, central banks appear – in most cases – to be reluctant to stray outside of their mandate of implementing monetary policy, and they generally guard their independence

from central governments. For this reason, in order to develop a functioning response to China's economic statecraft, liberal states would not only need to cooperate closely with the business sector, but also coordinate industrial, fiscal, and monetary policy.

At the same time, some development can already be observed: Covid-19 and supply chains, the war in Ukraine, and vulnerabilities are all drivers that have served to mould public discourse. In the past, it is not the economy that has served as a unifying factor in liberal economies, but rather threats to national security. To this end, China's malign economic influence should be seen as more of a national security threat.

That said, this poses challenges and requires a careful process that does not induce xenophobia, while strengthening a coherent liberal ideology. For example, Russia's war in Ukraine has provoked a strong reaction internationally. This has stayed in the domain of international relations, however. China's economic coercion seldom enters the domain of national security, and hence it does not produce similar reactions, which would build political unity. This is particularly true of the US, where most companies have large stakes in maintaining good relations with the CCP in order to be able to do business in China. Thus far, while the EU has been working on reducing critical dependencies,⁹⁴ Australia and Lithuania are the only places where a reaction to Chinese economic coercion has occurred that is akin to reactions to the Russian invasion of Ukraine.

92 See <https://deloitte.wsj.com/articles/china-dispatch-complexities-of-decoupling-supply-chains-7c743ae>.

93 See <https://mitsloan.mit.edu/ideas-made-to-matter/reshoring-restructuring-and-future-supply-chains>.

94 See [https://www.critical-entities-resilience-directive.com/#:~:text=The%20Critical%20Entities%20Resilience%20Directive%20\(CER\)%20aims%20to%20reduce%20the,of%20the%20internal%20market%20depend](https://www.critical-entities-resilience-directive.com/#:~:text=The%20Critical%20Entities%20Resilience%20Directive%20(CER)%20aims%20to%20reduce%20the,of%20the%20internal%20market%20depend).

Authors

Jukka Aukia is a Senior Analyst at the European Centre of Excellence for Countering Hybrid Threats. He holds a PhD in Asian Studies from the University of Turku and a master's degree in Asian Studies from the University of Amsterdam. Previously, Mr Aukia worked as a post-doctoral researcher at the Centre for East Asian Studies, University of Turku.

Ragnar Ingibergsson is the Senior Analyst for economic hybrid threats at the European Centre of Excellence for Countering Hybrid Threats. He has an MSc in Political Science, and an MSc in Informatics from the University of Gothenburg. Mr Ingibergsson, a veteran of the Swedish armed forces, has over 15 years' experience in the banking and professional services sector, as well as experience working as a part-time university teacher for the past 20 years.



Hybrid CoE

The European Centre of Excellence
for Countering Hybrid Threats