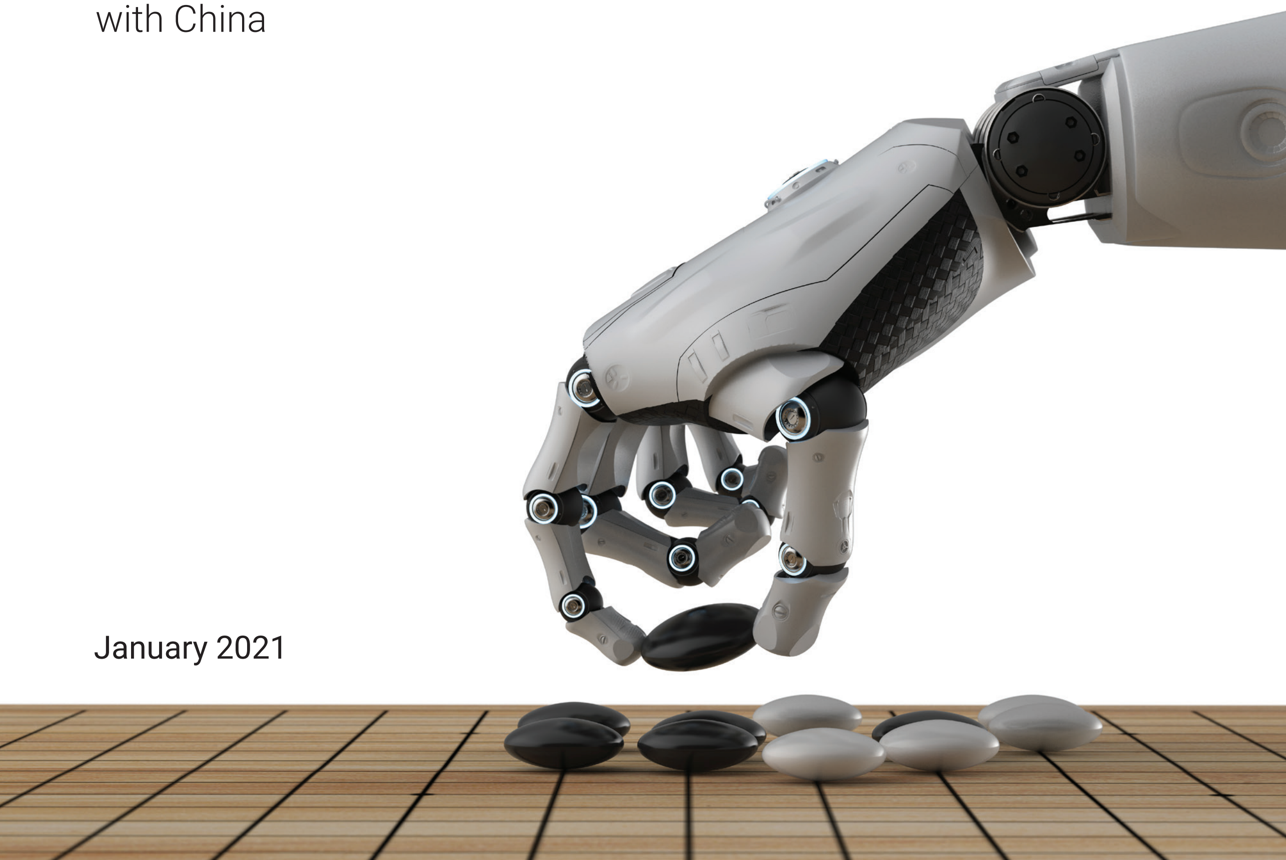
Protect, Constrain, Contest

Approaches for coordinated transatlantic economic and technological competition with China



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Foreword

There is possibly no bigger issue facing the transatlantic relationship than how to develop a coordinated policy towards China in the fields of technology and trade. For too long this has been cast in purely American terms. However, this is something in which the Europeans and the UK as much as the Americans have a stake. There is little doubt that both Europe, the UK and the US can compete with China. There is even less doubt either that both Europe and the UK share many of the same concerns as the United States about China's uses of technology both at home and abroad. By going it alone, former President Trump made it far more difficult for Europe, the UK and the US to develop a systematic and effective strategy. With the election of a new American President who seems to be committed to rebuilding transatlantic ties there is now hope that a new era is about to begin. Hopefully, this will not only be good for the transatlantic relationship. It may also help put the broader western relationship with China on a steadier and more manageable footing. We can only wait and see. But it is at least possible that a new deal between Europe, the UK and the United States could over time lay the foundation for a more mature relationship with China. We can only wait and see. We continue to live in interesting times.

Professor Michael Cox
Founding Director, LSE IDEAS

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Introduction: A three-pillar strategic framework for competing with China

PETER WATKINS

Over the past year, there has been a growing realisation in the traditional "West"–including the United States, the European Union and the United Kingdom–of the challenge posed by China. There had been unease before, particularly in defence and security circles in the US but the dominant narrative, especially in the EU and the UK, was of China as an economic opportunity. Although few Western politicians simplistically "blamed" China for causing the Coronavirus pandemic, the latter helped crystallise the change in tone. The academic consensus in the early months of the pandemic was that it would accelerate existing geo-economic and geopolitical trends (including the shift in economic power from the "West" to the Indo-Pacific). Additionally, the Chinese authorities' handling of the initial outbreak in China and their subsequent behaviour, while the pandemic still raged in the US and Europe, towards Australia and Hong Kong highlighted the Chinese Communist Party (CCP) leadership's nationalistic and authoritarian instincts and values.

China is not yet a military challenge in the same way as Russia (or the Soviet Union) was during the Cold War. But neither is it simply an economic competitor. It is something in-between that conventional Western analytical and policy frameworks struggle to define. There are three interlinked elements:

1. The sheer size (and rate of growth) of the Chinese economy. This would not of itself be unmanageable (on some measurements, the US economy is still bigger), were it not for the fact that…

2. Chinese compliance with the international rule-set (intended to limit the market distorting effect of size or other factors) has been selective. China has limited international access to its domestic market (while enjoying largely unfettered access to others'), heavily subsidised certain domestic industries, pursued large-scale state-sponsored industrial espionage, etc.

3. It has become increasingly apparent that this pattern is driven not by economic protectionism but by the political agenda of the CCP which is irreconcilable with Western liberal values.

It is this combination which constitutes the challenge and means that the Western policy response must be tailored accordingly. Some of the required adjustments may not be comfortable. They could mean crossing previously preferred analytical boundaries between geo-economics and geopolitics (or, put another way, between economic policy and security policy) as well as taking precautionary steps to protect the West's own vital economic interests which may sit uneasily with a fundamentally free-market approach.

This report contains five essays, by US and European contributors, which address different aspects of this problem set. Taken together, they provide the basis for a strategy with the following three main pillars or lines of effort:

Protect: Transatlantic allies need to better protect and control access to those Western technologies which are still ahead of Chinese ones—and which the Chinese state therefore seeks to access through fair means or foul. Technologies can become vulnerable through exports (either directly to China or third countries) or through Chinese inward investment in companies in the West. This requires tougher and more dynamic national export and Foreign Direct Investment (FDI) controls—and, crucially, more effort to identify gaps or inconsistencies between national regimes. The papers by Ashley Lenihan, François Chimits and Anthony Vinci all address aspects of this line of effort.

Constrain: Allies should act to strengthen the international framework—the World Trade Organisation (WTO) and the various international standards setting bodies—from which China as well as the West have benefited, so that China is less able to "tilt" the playing field to its advantage. Stephen Paduano's paper addresses current issues with the WTO and makes recommendations to address them. Anthony Vinci's paper proposes additional measures, including mutual aid, which groups of like-minded countries could take collectively to deter uncompetitive behaviour by China and mitigate the impact of coercive economic measures taken by China against one or more of them.

Contest: Sustaining the Western position in the face of the China challenge cannot be a purely defensive game. Nations need to reduce their dependency on certain Chinese technological applications (such as Huawei's 5G technology which became a cause célèbre in several countries in 2020), seek to ensure that such dependencies do not recur with future critical technologies (e.g. Artificial Intelligence), and regain the lead in key technologies which would enhance the competitiveness of Western economies and the resilience of their societies (e.g. clean energy). This would, of course, make certain sectors attractive targets for industrial espionage (which the measures discussed under the "Protect" pillar would help guard against). However, it would also better enable countries to deter Chinese economic brinkmanship—and compete more effectively for the support of the "in-between" states which have been the target of much recent diplomatic and economic seduction by Beijing. Jonathan Liebenau's paper sets out specific proposals.

What emerges clearly from the analyses in this report is that a successful strategy requires a sophisticated toolset, applied coherently and judiciously by and among like-minded partners—there are no short-cuts. But much work has already been done. The arrival of a new Administration which seeks to "repair" the US's alliances and the upcoming UK-chaired G7 meeting in June provide timely opportunities to add impetus to this agenda. ■

What tools are being enacted in Europe to deal with Chinese economic distortions on the single market, and how can like-minded partners act consistently?

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The election of President Biden has raised the prospect of close collaboration between the EU and the US on the challenges of the State-led Chinese economic system. Besides political proximity, the executives of the Biden administration have been clear about prioritising cooperation with allies,[1] singling out the EU in particular, and proving resoluteness with a soft response to the conclusion of the EU-China negotiation on a Comprehensive Agreement on Investment (CAI) in late December. Often overlooked, however, has been the steady and subtle shift over past years by the EU regarding the Chinese economic challenge on the back of a growing critical consensus towards China among firms, citizens, experts and politicians.[2] Beyond the highly publicised new ternary strategy approach developed by the Commission on China in March 2019,[3] efforts have been advanced on operational tools. Focusing solely on domestic level playing field issues,[4] this section will summarise these efforts and gauge the perspectives of cooperation with like-minded partners to shield domestic markets from Chinese economic distortions.

> In parallel to efforts to build up its toolbox, the EU has been pushing to improve information on distortions in order to activate these tools when needed.

Strengthening and expanding traditional defence instruments

Reforms of the multilateral system looked unreachable under the Trump administration,[5] and some argue that they still do under a Biden administration for differing reasons, with a consensus that this is not among the first priorities in the coming quarters. However, the EU's unilateral instruments to protect the single market (anti-dumping and anti-subsidies) have been strengthened, even though actual enforcement is largely further down the road. Initiated in 2013, mostly to circumvent the end of a clear China non-market economy status at the WTO,[6] the modernisation of trade defence instruments (TDIs) finalised in 2018 was not a direct result of the recent more assertive approach to China. Still, it set the foundation for a stronger stance by facilitating and amplifying future TDI-related tariffs,[7] clearly with China-driven distortions in mind. Indeed, China challenged this new approach at the WTO (unsuccessfully[8]) and was the subject of the first newly created EU Commission reports on significant distortions,[9] facilitating and expanding the coverage of TDIs on imports from China. Besides these de jure upgrades to its tools, the EU has also strengthened its ability to employ them through reorganisation of the DG Trade, with the creation of a Chief Trade Enforcer wielding dedicated human resources,[10] about which more information should be released soon. Additionally, more recently (and likely with the Trump administration in mind also) the EU announced a new tool to counter coercions dedicated to changing EU or EU member states' actions.[11]

Alongside this build-up of de jure and administrative capacities, the European Commission has recently displayed its willingness to act, with anti-dumping cases based on the lack of labour union diversity, trickling down of subsidised prices or raw material export restrictions,[12] and a case against transnational Chinese subsidies.[13] These efforts have translated into a more dynamic use of TDIs by the EU, rising from 13 new investigations per year between 2013 and 2017, to 16 in 2019 and in 2020, with China being the investigated partner in about two thirds of all of these procedures.[14] Admittedly, only a few have led to actual restrictions thus far, as these investigations take some time.

New tools to tackle distortions beyond the reach of traditional TDIs, such as the services sector, FDI and public procurement, alongside building information capacities

To protect the domestic market from distortions, the Commission has gone beyond usual TDIs and, in June last year, proposed an innovative and unique competition tool to tackle foreign subsidies on the domestic market, including on services, foreign dominant positions, foreign direct investment and acquisitions as well as public procurements[15]. It should, however, be noted that this is still work in progress, and presents numerous substantial questions regarding administrative organisation, competence distribution and WTO compatibility. Regarding public procurement, it is also worth noting that the Commission has formally been working on another specific instrument to spur market opening in third-party countries by facilitating the exclusion of bidders stemming from partners not offering a satisfying level of reciprocal opening. On this point, however, divergent views among member States have thus far hampered progress.

In parallel to efforts to build up its toolbox, the EU has been pushing for the facilitation of access to information in order to activate these tools when needed. At the bilateral level, the CAI contains commitments by China to communicate subsidies provided in the services sector and to provide corporate information on SOEs when requested. At the plurilateral level, the EU has agreed with Japan and the US to strengthen WTO transparency obligations, which would create a form of enforceability for those obligations China has long fell short on.[16] Finally, the EU has been among OECD members pushing for transnational sector studies on publicly provided industry support, which find China as the provider of 90% of the world's subsidies in sectors such as aluminium and semiconductors.[17]

The direction is set to stay unchanged, but friends are sought after

President von der Leyen, in her speech at the European Parliament in November 2019, marked a strategic shift of priorities by calling for a “geopolitical” Commission. The Commission’s program for 2021 includes the previously mentioned foreign subsidy and public procurement tools. Additionally, Commissioner Dombrowski listed multilateral reform and fair trade as two of three top priorities when he took on the role of Trade Commissioner in October 2020.[18] France and Germany have also shown general support of this trend, both in public opinion and in the actions of their leaders, at least publicly.

Responding to clear signals from the Biden administration for closer cooperation, the EU has outlined a cooperation plan with the US,[19] which is to be extended to like-minded partners “whenever possible”. While China is not apparently directly mentioned in the proposition, many topics point at a united front to confront the challenges of the Chinese State-led economy, more so since rule-based and democratic values feature prominently throughout the paper. Discussions on WTO reform, which started with the Trump administration under the trilateral EU-US-Japan framework previously mentioned, will offer an avenue to align views on defence instruments. The dimensions where the EU has recently expanded its instruments are actually seen as among the main loopholes of the current WTO rules in addressing distortions, namely: services, transnational support, value-chain effects, the non-market economy, labour markets, and dominant positions in third-party markets. This could also lead to common cases by the EU and the US against some Chinese distortions, be it through the WTO if the dispute settlement mechanism is fixed, through coordinated unilateral instruments, or through mere information-sharing on the distortions. On public procurement, prospects for future cooperation look more limited as many governments have aired intentions to mobilise public demand to develop domestic capacity and revive the domestic economy, including the Biden administration.

While the US was engaged in a trade war in an ultimately unsuccessful attempt to push China to curb its distortive economic practices, the EU was slowly building up its ability to better shield its domestic market from the very same distortions. Now, with intentions of cooperation running high on both sides of the Atlantic, alongside shared challenges and goals, like-minded partners have a considerable window of opportunity to tackle the spill-overs of the State-led Chinese economy. To prove former US Trade Representative Robert Lighthizer wrong,[20] the EU still has to demonstrate its ability externally to stand strong on its positions when tensions heat up with China. Internally, it needs to build support for such cooperation with allies. That, by definition, necessitates some concessions to the partners. In parallel, partners had better be aware the EU could very well deliver. With the opportunity of strong transatlantic alignment, like-minded partners with strong feelings against Chinese distortive practices had better get prepared to jump onboard promptly. This entails some serious homework on what their preferences and redlines are. Even more so for those that happen to be firmly liberal countries with the US and the EU as historical strategic allies. ■

Notes

1 Once again repeated in early January on CNN by Biden's National Security adviser, J. Sullivan.

2 For firms, besides the EU Chinese Chamber of Commerce publications, an iconic example is the German industrial association BDI-published "hawkish" Position paper on China from October 2018. For citizens, Pew Research's annual survey of European countries' public opinions towards China and the US indicates a downward slope for several years, likely amplified through the COVID-19 crisis.

3 The EU Commission has published in March 2019 a "Strategic outlook" on EU-China, in which China is characterised as being "simultaneously, in different policy areas, a cooperation partner with whom the EU has closely aligned objectives, a negotiating partner with whom the EU needs to find a balance of interests, an economic competitor in the pursuit of technological leadership, and a systemic rival promoting alternative models of governance". It has become a common analytical framework for the Commission.

4 The level playing field is a situation when all market participants can "compete on an equal footing" (OECD), hence free of discriminative state interventions such as specific subsidies, regulatory discrimination and national preference. Other economic challenges, such as competition, security or trust related ones (for instance standards, export control, FDI screening, supply dependencies), are omitted.

5 WTO reform is often referred to by EU officials and experts as the first-best solution to respond to China's distortive practices. This is not covered here as S. Paduano's chapter already cover this issue. It is worth bearing in mind that most of the actions described here are aligned with the broader WTO reform envisioned by the EU, which, on level playing field questions, is largely shared by like-minded partners, such as the United Kingdom, the United States and Japan.

6 With the end of the 15-year period of non-market economy status provided by Article XV of China protocol of accession to the WTO in 2016, the EU chose to do away with reference to this status in its anti-dumping investigations in favor of a case-by-case approach supported by country specific reports produced by the EU Commission. When a sector is deemed not to function by market-principles, the level of dumping, which is the difference between the normal price and the export price, can be benchmarked against.

7 For further details on this reform, which was actually conducted through two pieces of legislation, two analyses by legal experts from Mayer Brown offer an overview: *EU Adopts New Dumping Methodology Addressing Cost and Price Distortions*, Dec. 2017; Trade Defense Instruments: Analysis of the Negotiated Proposal on Modernization, Jan. 2018.

8 So much so that China decided in May 2019 to suspend the procedure not to have the panel conclusions published.

9 A 500-page report titled "Commission staff working document on significant distortions in the economy of the People's Republic of China for the purposes of trade defence investigations" (Dec 2017). A second report was eventually published in October 2020 on Russia.

10 Currently, a European Parliament report states that the EU had a headcount of civil servants dedicated to trade defense of 125, which is approximately only a third of what the US administration wields (Balanced and Fairer World Trade Defence. EU, US and WTO Perspective, E. Yalcin, H. Welge, A. Sapir, P. C. Mavroidis, May 2019).

11 Procedures can be traced on the EU Parliament website: https://www.europarl.europa.eu/legislative-train/theme-an-economy-that-works-for-people/file-instrument-to-deter-and-counteract-coercive-actions-by-third-countries ;

12 Respective initiation documents ref.: 2020/C 51/12 ; 2020/C 351/08 ; 2020/C 352 I/01.

13 Regulation 2020/776.

14 from 2013 to 2017, numbers are from *Trade defense instrument: Audit preview, European court of auditors* (May 2019). For 2019, *European Commission, 38th Annual Report from the Commission to the Council and the European Parliament on the EU's Anti-dumping, Anti-subsidy, and Safeguard Activities and the Use of Trade Defence Instruments by Third Countries Targeting the EU in 2019*, COM(2020) 164 final (April 2020). For 2020, this was compiled from the DG Trade website (https://trade.ec.europa.eu/tdi/index.cfm?sta=41&en=50&page=3&c_order=date&c_order_dir=Down).

15 White Paper on foreign subsidies in the Single Market, European Commission, June 2020.

16 See the *Joint Statement of the Trilateral Meeting of the Trade Ministers of the United States, European Union, and Japan* from May 2019.

17 Measuring distortions in international markets: the aluminum value chain, OECD, Jan. 2019; *Measuring distortions in international markets: The semiconductor value chain*, OECD, Dec 2019.

18 See European Parliament: speech by EVP Dombrovskis at Trade Policy Day "A Renewed Trade Policy after the COVID-19 Pandemic", Oct. 2020.

19 See the *Council conclusions on European Union – United States relations*, European Council, Dec. 2020.

20 In two articles in *Foreign Affairs* in June and August 2020 (*How to make trade work for workers, charting a path between protectionism and globalism, Foreign Affairs*, then *Trump's trade policy is making America stringer : a response to critics*), then USTR R. Lighthizer justified the unilateral approach by referring to an alleged lack of determination to seriously confront China for its distortive actions.

How can the effectiveness of Western FDI regulations be ensured with respect to the national security risks posed by strategic inbound investment from China?

ASHLEY LENIHAN

> New and old competitors using FDI as a tool of statecraft are only likely to continue to emerge in the years ahead.

It is clear that at least some CCP-backed and influenced companies seek to use foreign direct investment (FDI) in a sophisticated and intentional way to increase China's competitive and technological advantage on the global stage. Since 1999, China's *Going Out* strategy has openly encouraged outward FDI to secure access to natural resources, export markets, and advanced technologies.[1] 2016 regulations later specifically encouraged outward FDI in sectors supportive of China's *Belt and Road* initiative and its industrial strategy (through, for example, the acquisition of high technology or advanced manufacturing assets).[2] Such investments often come with 'preferential government financing, subsidies, and access to an opaque network of investors' that give these Chinese acquirers a distinct advantage over most other market actors[3] in sectors that are often of critical strategic importance. This has understandably raised concern in a number of Western countries and led to a number of potential Chinese acquisitions being blocked on national security grounds in recent years—in the US, Germany, Canada, and Australia, to name but a few.[4]

This said, many countries throughout modern history have used state-backed or -influenced investments abroad to achieve strategic goals at home and on the world stage.[5] While the conversation is currently focused on China, investments from a number of other countries have also been blocked or unwound on national security grounds in the West,[6] and new and old competitors using FDI as a tool of statecraft are only likely to continue to emerge in the years ahead. Even investments originating from our closest allies have the potential to threaten national security if those allies have previously failed, for example, to adhere to export control laws designed to keep critical and dual-use technologies out of the reach of competitors.[7] And as concern over strategic investments in recent years has increased, a significant number of countries have sought to introduce or update the laws and regulations covering FDI and national security, reaching at least 62 jurisdictions by 2019,[8] with at least eleven jurisdictions making changes in 2020 following increased concern over the security of depressed assets and health supply chains raised by the COVID-19 pandemic.[9]

It is thus vital that, as the UK and other Western countries introduce new regulations to screen foreign investments for national security concerns (or adjust existing ones), they ensure these regulations are not *only* aimed at screening out strategic or politically motivated investment from China alone. This is both to ensure that the full spectrum of potentially threatening foreign investments—from all quarters—are addressed, and to make it clear to investors that Western economies remain fully open and welcoming to *benign* inward foreign investment from China and the world.

With this in mind, how do we ensure inward FDI regulations in the UK and its allies are as effective as possible in screening out sophisticated and strategically motivated government-influenced or controlled foreign investments today? *I argue that there are three basic elements needed for effective cooperation and coordination to secure the West against harmful foreign investment while remaining open to legitimate FDI: 1. consistency of rules in line with best practice, 2. open lines of communication and intelligence cooperation, and 3. a commitment to institutionalisation and capacity building.*

1. Consistent rules in line with best practice

The ability to block or mitigate FDI on national security grounds is a sovereign right under international law. However, the adoption of domestic laws and regulations that provide clear jurisdiction, enabling mechanisms, and review regime processes make it far more likely that: a) threatening strategic foreign investments will be 'caught' in time and b) benign foreign investors will not be deterred.

Allies lacking mechanisms to scrutinise FDI should thus be encouraged to adopt regulations or enabling legislation that allow them to review FDI on national security grounds. Those that do have such mechanisms in place, should update them to ensure that they are fit to respond to the wide range of existing and emerging threats. The purpose would be to build a decentralised FDI security architecture to protect the interests of the Five Eyes and NATO countries in a coherent way through consistent and clear rules in line with international best practice. This would help ensure threatening investments do not slip in 'under the radar,' while offering a global example for best practice FDI regulations that maintain liberal open economies while still protecting national security.

Such rules should be consistent with the OECD Guidelines for Recipient Country Investment Policies, and adhere to 'the principles of non-discrimination, transparency of policies and predictability of outcomes, proportionality of measures, and accountability of implementing authorities.'[10] The US system of screening provides a good model, as one of the oldest and arguably the most institutionalised FDI national security review regimes, with clear guidelines for intervention, frameworks for risk assessment, and a long history of successful mitigation implementation.

Proposed UK legislation in the form of the *National Security and Investment Bill* is a significant and important step in this direction, bringing the UK in line with existing US and OECD best practice by providing a comprehensive review regime intended to be non-discriminatory, transparent, proportional, and accountable, that is also comprehensive in scope and jurisdiction. However, the fact that the Bill covers *all*, rather than just *foreign*, investment—and that it delimits a large number of sectors requiring mandatory investment notifications alongside a voluntary regime covering the rest of the economy—raises concerns that it is too ambitious in scope, without providing for the accompanying infrastructure required for success (see section 3).[11]

The EU faces a different challenge. The 2020 EU framework for screening of foreign direct investment (FDI) allows the EU Commission to raise concern over investments in member states threatening *EU-wide* security, while also (importantly) protecting its member states' sovereign right to ultimately make their own decisions about FDI in their country. The result is that while the Commission encourages its members to follow OECD best practice, only 15 out of 27 EU states have FDI screening mechanisms in place, and these are dramatically different in terms of process, coverage, and institutional capacity.[12] For the EU framework to be effective, and fully protect the EU from backdoor investments that threaten member state and/or EU-wide security, many member state regulations will need to be brought on par with the US system, and those states that do not yet have mechanisms should be encouraged to adopt them.

Finally, best practice among NATO allies should also entail ensuring that these FDI regulations focus purely on national security, rather than being wider in scope to include *national interest* or other protectionist considerations. Conflation of the two only sows confusion among legitimate investors, while undermining the argument that legitimate national security assessments of FDI are possible within an otherwise liberal economic international order, without being subject to lobbying by domestic interest groups or other political pressures. Convincing allies such as Canada and Australia to forego—or at least more clearly separate—their interventions based on national interest from those based on security, would go a long way towards de-politicising FDI screening processes.

2. Open lines of communication and intelligence cooperation

In addition to consistent rules, it is vital that Western allies have open lines of communication on FDI-related security issues. Indeed, one of the trickiest areas for states to navigate historically has been where a foreign investment poses a national security risk but is taking place extraterritorially. A number of states, including the US and China have made domestic legal provisions giving them jurisdiction over certain foreign investments abroad that impact national security at home.[13] The proposed UK *National Security and Investment* law will also allow for this under certain conditions.[14] But such rulings are difficult to enforce without cooperation from the target state. Indeed, convincing another government to enforce a block on an investment being made in their country (or better yet, to block it themselves) on national security grounds requires the highest levels of intelligence and information sharing, trust, and coordination. In such cases it also helps to have established contacts and lines of communication in allied states on this issue.

Strategically motivated investments also appear to be getting more sophisticated in their attempts to evade 'capture' by existing review mechanisms, using acquisition vehicles that make it difficult to trace ultimate ownership or effective influence. In such cases, information and intelligence sharing among allies will be crucial, as they seek to determine the control and influence foreign governments may have over potentially sensitive investments. Recent UK, EU, and US legislation has made positive moves in this direction, providing legislation enabling intelligence coordination and data sharing while facilitating or establishing lines of communication.[15] None of this will be possible, however, without designated and experienced points of contact among allied states requiring greater investment of time and money. Exchange programs between personnel working within these regimes in different allied countries may also be especially useful for training, establishing trust, and relationship building.

3. Institutionalisation of a culture of best practice and transparency

Finally, it will also be crucial to ensure that a strong institutional culture and deep institutional capacity supports the national security FDI review regimes in NATO states. This is not only to maintain Western liberal economic values in the face of competition from more closed economies, but also to ensure that these regimes simply have the capacity needed to do their jobs. Strong working institutions, with multi-agency involvement—like the Committee on Foreign Investment in the United States (CFIUS)—have been able to largely withstand outside political pressures and focus on national security remits.

As national security related FDI reviews grow in volume and complexity, a key question for NATO countries will be: Do they have the right information, databases, and tools they need to adequately assess risk? Are they well-staffed? And do those staff have the security clearances and training they need to do their jobs effectively? CFIUS also has deep institutional capacity, for example, with dedicated representation from nine agencies (and ex-officio representation from many others)—all with dedicated and trained staff holding security clearances.[16] Yet, even with this, a key provision of recent US legislation was still to provide for greater funding and staffing because of the increased volume of complex cases that now require review.[17]

The new UK regime may face particular challenges in this area, as the institutional capacity being built behind it is unclear. We do not yet know, for example, whether there will be regularised feed-in from military and intelligence services to the Department for Business, Energy, and Industrial Strategy (BEIS) that will be leading these reviews, or if such input will be ad hoc. CFIUS case history shows that even with a fairly behemoth organisation and sometimes over 13 agencies feeding into the process, worrying instances of strategic FDI have 'flown under the radar' only to be discovered and reversed after the harm had likely already been done.[18] With a UK regime set up to require the review of a significant number of cases annually in a wide variety of sectors requiring specialist understanding to assess risk, clear lines of input from across government and adequate resources marshalled by well-trained and adequately numbered staff will be required to ensure national security is fully protected going forward. Many EU regimes will similarly need to get up to speed and be adequately resourced, emphasising the value of future cooperation between allies on this issue.

In sum: All of this needs to be in place—consistent rules, open-lines of communication, and institutional capacity—to have an effective transatlantic coordination regime on foreign investment and national security that fully addresses the risks posed by strategic foreign investments from China and beyond. ■

Notes

1 UNCTAD. 2006. World Investment Report 2006 – FDI from Developing and Transition Economies: Implications for Development. Geneva: United Nations; USCC. 2011. Going Out: An Overview of China's Outward Foreign Direct Investment. Washington, DC: US-China Economic & Security Review Commission, March 30.

2 US DOS. 2020. 2020 Investment Climate Statements: China. Washington, DC: Department of State.

3 Ibid.

4 See, e.g.: Lenihan, A. 2018. *Balancing Power without Weapons: State Intervention into Cross-Border Mergers and Acquisitions*. Cambridge: Cambridge University Press; and UNCTAD. 2020. *World Investment Report 2020*. Geneva: United Nations.

5 See, e.g.: Graham, E. M. and D. M. Marchick. 2006. *US National Security and Foreign Direct Investment*. Washington, DC: Institute for International Economics, Kang, C. S. E. 1997. US Politics and Greater Regulation of Inward Foreign Direct Investment. International Organization 51 (2): 301–33.

6 See, e.g. Lenihan. 2018. *Balancing Power without Weapons*; and UNCTAD. 2019. Investment Policy Monitor: Special Issue 22 – National Security-Related Screening Mechanisms for Foreign Investment: An Analysis of Recent Policy Developments, November 28.

7 Lenihan. 2018. *Balancing Power without Weapons*, especially pp. 1-69; 134-140; 216-231.

8 OECD. 2020. Acquisition- and ownership-related policies to safeguard essential security interests: Current and emerging trends, observed designs, and policy practice in 62 economies. Paris: OECD.

9 UNCTAD. 2020. *World Investment Report 2020*. Geneva: United Nations, p. 93. See also: OECD. 2020. Investment screening in times of COVID-19 and beyond, Paris: OECD, 7 July.

10 OECD. 2009. Recommendation of the Council on Guidelines for Recipient Country Investment Policies relating to National Security. OECD/LEGAL/0372. https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0372

11 Lenihan, A. 2020. Oral Evidence to the Public Bill Committee: National Security and Investment Bill (Second sitting), November 24: https://hansard.parliament.uk/Commons/2020-11-24/debates/baf4f10c-493a-49ec-9fca-8079eacb5a1e/NationalSecurityAndInvestmentBill(SecondSitting).

12 These include Austria, Denmark, Germany, Finland, France, Hungary, Italy, Latvia, Lithuania, the Netherlands, Poland, Portugal, Romania, Slovenia, and Spain. See: EU Commission. 2020. List of screening mechanisms notified by Member States, November 24: https://trade.ec.europa.eu/doclib/docs/2019/june/tradoc_157946.pdf.

13 Under SEC. 1703 of the *Foreign Investment Risk Review Modernization Act of 2018* (FIRRMA), CFIUS has jurisdiction to review 'Any merger, acquisition, or takeover … by or with any foreign person that could result in foreign control *of any United States business*.' (See: https://home.treasury.gov/sites/default/files/2018-08/The-Foreign-Investment-Risk-Review-Modernization-Act-of-2018-FIRRMA_0.pdf). In practice, this has been used to block the US business-related portions of foreign investments into businesses head-quartered abroad. For example, President Obama vetoed the acquisition of the US business of a German semiconductor company (Aixtron) by Grand Chip Investment (a Chinese-owned fund) on national security grounds in 2016,

which was part of a larger proposed takeover of the German firm. (See: https://obamawhitehouse.archives.gov/the-press-office/2016/12/02/presidential-order-regarding-proposed-acquisition-controlling-interest.) In China, the National Development and Reform Commission and the Ministry of Commerce issued new *Measures for Security Review of Foreign Investment* in December 2020 that 'cover both direct and indirect foreign investments in China', meaning that 'any investor acquiring indirect 'actual control' of a Chinese target …in an offshore transaction will likely be subject to a national security review in China' in the future (Baker McKenzie. 4 January 2021. 'China enacts new foreign investment security review measures.' Lexology, https://www.lexology.com).

14 See: Part 3, Section 52 of the UK's *National Security & Investment Bill,* as introduced to Parliament. Available at: https://publications.parliament.uk/pa/bills/lbill/58-01/165/5801165.pdf.

15 The EU *Framework for the Screening of Foreign Direct Investments into the Union* provides for both a coordination mechanism for information sharing among EU member states (in Articles 6 – 12) and a provision for international cooperation (Article 13). (Available at: https://eur-lex.europa.eu/eli/reg/2019/452/oj). In the US, see SEC. 1713 of *FIRRMA*. In the UK, see Part 4, Section 54 (2) of the *National Security & Investment Bill,* as introduced to Parliament.

16 For more details on CFIUS composition, see: https://home.treasury.gov/policy-issues/international/the-committee-on-foreign-investment-in-the-united-states-cfius/cfius-overview.

17 See SEC. 1702 (a) (5) and SEC. 1717 (a) of *FIRRMA*.

18 In 2011, for example, CFIUS effectively forced the Chinese company Huawei to divest the assets it had acquired in 2010 from 3Leaf Systems, an American cloud computing technology company. (See: Raice, S. and A. Dowell. 2011. Huawei Drops US Deal Amid Opposition. Wall Street Journal, February 21).

Managing China at the WTO: Trilateral reform, differential treatment, and the path to reform

STEPHEN PADUANO

Agreement is hard to come by at the World Trade Organisation, but on one issue a consensus has emerged: the WTO is in crisis. Four years of Donald Trump's institutional arson and Xi Jinping's escalated economic coercion have placed tremendous pressure on the world's rules and norms, and the WTO—the forum for negotiating trade agreements and settling trade disputes—has fallen victim to the great-power politics. With neither a Director General to lead the WTO through these turbulent times nor a functioning Appellate Body to resolve the mounting tension, the global economic system has suffered.

However, the recent change of administration in the United States gives reason to believe that long-awaited WTO reform may proceed more earnestly, even if President Biden seeks to maintain a hard line on China. For the EU and the UK, which share interests in rebuilding the WTO while still challenging Chinese trade distortions, this is a moment to seize.

In the coming months, leaders in Brussels and London should have their eyes on two objectives. First, to bring the US back to the table in a careful and productive manner. Second, to create common cause with developing countries. The importance of the former is clear, though the urgency of the latter may be less so. While working with Washington will be crucial for formulating a common position on prohibited Chinese subsidies, tariffs, and non-tariff barriers, as well as for restarting the WTO reform process, it is the 110 self-designated 'developing' countries which will have the final word on any lasting change. As developing countries constitute two-thirds of all member states and form the basis of China's political support in the WTO, regaining their trust and making multilateralism work for them will necessarily be high priorities.

"The recent change of Administration in the United States gives reason to believe that long-awaited WTO reform may proceed more earnestly, even if President Biden seeks to maintain a hard line on China."

> Allowing China to [...] portray itself as a champion of the developing world's trade preferences has been a profound shortcoming of Western diplomacy and rhetoric.

Working with Washington

The EU and UK should not expect the Biden administration to pursue a total reversal of Trump's WTO policies. Although Trump's trade agenda was uniquely costly and incendiary, his approach to the WTO bore an uncomfortable degree of bipartisanship. Indeed, the Trump administration's signature policy of blocking appointments to the WTO's Appellate Body was one that had begun under President Obama, who obstructed the traditionally automatic reappointment of Jennifer Hillman (an American) in 2011, the appointment of James Gathii (set to be the AB's first sub-Saharan member, from Kenya) in 2014, as well as the appointment of Seung Wha Chang (a South Korean) in 2016— the first time the US had ever done such things.

Although President Biden has broken with Trump by signalling his interest in partners and institutions, he has also declared that he is "not going to make any immediate moves" against Trump's trade policies.[1] Europe's yearning to return to the *status quo ante bellum* is understandably strong, but on the American side the matter of Chinese trade distortions and the need for reform will come first.

Consequently, the EU and the UK should not move too quickly to pressure the Biden administration to approve the selection of new members to the Appellate Body (AB). Nor should they offer any more extra-judicial outs to China, such as the 'stop-gap' appellate court the EU created in March of 2020 in the AB's absence.[2] If the EU and the UK would like to see meaningful multilateral reform and progress against Chinese coercion, they ought to help the US productively deploy and unwind the leverage it has built in the WTO and against China. This will entail a dual-track effort of curtailing China's distortionary trade policies, described elsewhere in this *China Foresight* report, and shepherding the Trilateral WTO Reform Proposal.[3]

The US, EU, and Japan's Trilateral Reform Proposal serves as a promising place to start for both efforts. The initiative, conceived in 2017 and delivered in 2019, outlines a number of changes that would strike at the heart of the Chinese economy. Chief among them are expanding the list of prohibited industrial subsidies, establishing the definition of a 'public body' for the purpose of regulating subsidies, clamping down on forced technology transfer, and reversing the 'burden of proof' in trade disputes such that complainants (e.g., the US) can enact retaliatory measures until subjects (e.g., China) demonstrate they are not guilty of WTO violations.[4]

Coupling these substantive changes with procedural changes—restructuring the AB's controversial 90-day decision timeline and more clearly delineating the permissibility of AB members' 'judicial activism'—are both reasonable and necessary. However, as of now, they have little hope of winning the support of the WTO's members.

The problem is that the battle lines have already been drawn around WTO reform, and China has capably convinced many developing countries that the Trilateral Reform Proposal is not in their interest. To some extent, it should be noted, China has been correct to say so. As the Trilateral Reform Proposal shows little regard for developing countries' 'Special & Differential Treatment', the subsidy allowances and infant-industry protections that are necessary for development, the proposal will fail to win the consensus support it needs to change WTO policy.

Special & Differential Treatment

It is important for developed countries to take Special & Differential Treatment seriously—not only as a matter of politics but also as a matter of policy. As Joseph Stiglitz, Ha-Joon Chang and many others have successfully demonstrated over the past two decades, imposing "market oriented conditions for a free, fair, and mutually advantageous trading system"—as the Trilateral Reform Proposal boldly purports— can be a false promise for many low-income and developing countries. At early stages of development, exposing burgeoning industries to cheap exports and inundating weak financial systems with hot money can impose grave costs on developing countries. State subsidies, protective measures, and institutionalised import-substitution arrangements are necessary ingredients for the growth and welfare of developing countries, as indeed they were in the past for the countries that are now considered 'developed'.

At present, the Trilateral Reform Proposal would appear to threaten developing countries with a return to the painful period of 'structural adjustment' in the 1980s and 1990s, when developed countries and international institutions prematurely mandated sweeping liberalisation policies. Thus the WTO's developing member-states have spared no time in issuing their own reform proposals, notably led by China, which propose several measures that are diametrically opposed to those of the US, EU, and Japan. Their call is for greater protections around Special & Differential Treatment. Chief among these is the reinstatement of 'non-actionable subsidies' (permissible subsidies against which others *cannot take action*), which expired in 1999. Reinstating these would allow for greater state action to support academic research and development, as well as industrial subsidies in locations of high poverty and high unemployment.[5]

It is difficult to disagree with such forms of subsidies or, for that matter, to find countries which do not engage in them already. In truth, their centrality in China's reform proposal is more about strategy than policy. By taking up the cause of developing countries' subsidies and tariffs, and rallying developing countries around the flag of Special & Differential Treatment, China has provisionally managed to insulate its own distortionary trade policies from the threat of the Trilateral Reform Proposal coming into effect. The great policy and strategic error of the Trilateral Reform Proposal is that it has allowed this to happen.

First and foremost, this is a policy error. Developing countries were not the only ones to learn the lessons of the structural adjustment period; developed countries and Western institutions have also come around to the idea that untimely liberalisation can stifle development. If the US, caught up as it so often is in the free trade rhetoric of yesteryear, has forgotten this lesson, it is incumbent upon the UK and EU to remind them.

> The task now is to decouple—not the economies of China and the West, but rather the politics of China and the developing world.

The World Bank, IMF, and WTO have come a long way from last century's push to repeal the development strategies encapsulated by 'Special & Differential Treatment', and there is no reason to return to that regressive effort now.

However, it is also a strategic error as it cedes the mistaken idea that China is a champion of poor countries' development—rather than a free-rider of international institutions' special privileges for developing countries, and worse, a net contributor to the immiseration of many low-income countries. The deflationary pressures on developing countries' manufacturing sectors, combined with the destabilising pressures of excessive Chinese financial outflows, can be a lethal cocktail for the developing world. As the extensive literature on the 'China Shock' has made clear, countries face an average of 10 years of depressed wages and labour-force participation rates following their first exposure to Chinese trade shocks.[6] Allowing China to claim the winning argument of low-income countries' state-led development and to portray itself as a champion of the developing world's trade preferences has been a profound shortcoming of Western diplomacy and rhetoric this past decade.

What can be done?

The task now is to decouple—not the economies of China and the West, but rather the politics of China and the developing world. Doing so will require concessions and pressure.

The concessions relate to recommitting to the provisions and allowances of Special & Differential Treatment. Such a recommitment will have to be established in the text of the trilateral reform proposal. With the power of the pen and a comparative advantage in middle-power diplomacy, the UK and the EU will be well placed to reshape the proposal and regain the trust of developing countries. If they succeed, they will have not only appealed to the majority of WTO members, but also paved the way for the necessary conditions of global economic development. Such strategy and policy successes are attainable, and they are largely positive-sum. The US has no core objections to states' well-founded development needs. Developing countries, in turn, have no reason to object to an alternative trilateral reform proposal that accounts for their interests in the way that China nominally does. The difficulty lies in the diplomacy: working with the US to redraft the proposal and shepherding developing countries' support for it.

The pressure, however, is a different matter. In addition to coordinating and maintaining checks on Chinese trade distortions, the UK and the EU will also have to work with the US to apply pressure to those WTO members which have wrongfully self-designated as 'developing' countries. Although the US under President Biden should be expected to honour the needs of the 36 WTO member-states which UNCTAD classifies as the 'least developed countries', among others facing comparable levels of underdevelopment, the countries which seize the WTO's special status for self-gain should be given no such benefits. It is these members—chief among them China, but also Qatar, the UAE, Israel, Hong Kong, and many more—which have subverted the category of 'developing country' and aggravated a variety of WTO crises, ranging from the breakdown of the Doha Round to the Trump administration's aggressive measures. The UK and the EU will have to spearhead an agreeable methodology for determining when a country does and does not qualify for Special & Differential Treatment, ensuring that China will not be able to self-designate as a developing country and evade WTO rules in perpetuity. The US' own proposal for this issue, which weighs a wide range of standards including the UN's Human Development Index and blunter metrics such as GNI per capita, will require greater input from partners (namely, the UK and EU) as well as from developing countries themselves.[7]

Supporting the continuation and expansion of certain 'Special & Differential Treatment' provisions, separating the developing countries from the opportunists, and exacting penalties on the latter will demand strength, endurance, and a transatlantic alliance that has been lacking these past four years. It will not be easy. But in turn, it will reduce the crisis of distortionary Chinese trade policies, provide the path to WTO reform, and revive the rules and norms of the global economic system. ■

Notes

1 Friedman, Thomas. “Biden Made Sure ‘Trump Is Not Going to Be President for Four More Years,” in The New York Times. December 2, 2020.

2 European Commission. “EU and 15 World Trade Organization members establish contingency appeal arrangement for trade disputes.” 27 March 2020.

3 Other essays in this report have considered how to challenge China beyond the confines of the WTO: an overarching strategic framework for countering coercive foreign and economic policies (Watkins), trade defence instruments to manage prohibited distortionary practices (Chimits), coordinated procedures and actions for foreign investment security (Lenihan), the construction of an economic alliance for the purpose of mutual aid and countervailing measures (Vinci), and how to develop a competitive edge with respect to China’s technology sector (Liebenau).

4 Office of the US Trade Representative. “Joint Statement of the Trilateral Meeting of the Trade Ministers of Japan, the United States and the European Union.” January 14, 2020.

5 China’s Proposal On WTO Reform. 13 May 2019.

6 Autor, Dorn, Hanson. “The China Shock: Learning from Labor Market Adjustment to Large Changes in Trade.” NBER Working Paper 21906. January 2016.

7 AN UNDIFFERENTIATED WTO: SELF-DECLARED DEVELOPMENT STATUS RISKS INSTITUTIONAL IRRELEVANCE. COMMUNICATION FROM THE UNITED STATES. WTO. November 2019.

Mutual Aid for Partner Nations Against Economic Coercion: A role for alliances outside of the WTO

ANTHONY VINCI

Economic statecraft has always been a part of international relations, but in recent years China has begun using economic coercion in new and more threatening ways against countries ranging from Australia to Sweden. These new economic threats require defensive responses. While reform at the World Trade Organization (WTO) may help in the long run, the WTO is not enough. A new approach to economic alliances is required to protect nations from economic coercion.

China is using its economic power to achieve geopolitical ends through the threat and execution of unilateral, punitive tariffs and other methods. This has been amply demonstrated through its recent interactions with Australia, for example, where China used tariffs on key Australian exports like beef, barley and wine, to punish the nation for its investigation of China's role in the spread of COVID-19. Similar coercive measures have been pursued against Sweden, Germany and other nations. Nor is it just China which uses economic power in such a fashion. Russia regularly uses its control over the flow of oil and natural gas to neighbouring countries like Ukraine to further its geopolitical goals.

Such use of economic coercion differs significantly from the traditional use of sanctions by the US and other nations. Sanctions and embargoes have in most cases been used in cases of breaches of international law or agreements, human rights abuses or significant national security threats. Additionally, in most cases, they have been multilateral in nature. Rather, the unilateral use of economic power for geopolitical purposes by China opens up a wholly new avenue for

> Ideally mutual aid would prevent, rather than respond to, economic attacks, since economic warfare undermines value for all sides involved and could very easily escalate.

international conflict in which punitive measures are used to execute diplomatic goals. At its most extreme, this is a form of economic warfare.

Democratic countries require a means of mutual aid to defend against such economic coercion. Ideally mutual aid would prevent, rather than respond to, economic attacks, since economic warfare undermines value for all sides involved and could very easily escalate into more aggressive measures or even into armed conflict. American trade restrictions on Japan in the late 1930s, which led to the attack on Pearl Harbour, are a case in point.

The World Trade Organization (WTO) could be seen as one means of tackling this issue. However, there are obstacles. The WTO is focused on trade, while economic attacks can equally come from other economic and commercial mechanisms, such as restrictions on financial institutions, the use of currency warfare (such as artificial appreciation or depreciation), adversarial investments and strategic mergers and acquisitions. Even within the narrower area of trade-based economic warfare, the WTO does not currently wield the internal decision-making apparatus and dispute resolution mechanisms to address unilateral economic attacks. Moreover, when the WTO does address such issues, it takes years to resolve disputes. This is self-evident in that Australia nor any other nation affected by Chinese economic attacks has received any support from the WTO. For these and other reasons, WTO reform is necessary and any such reforms should take into account the case of unilateral economic warfare.

Another avenue to pursue against unilateral economic attacks is the use of multilateral economic defence alliances. Such alliances provide a means to not only respond to economic attacks but to prevent them. An economic alliance could be formed with the limited but express purpose of defence against economic coercion and attacks. Like a political alliance, an economic alliance would require agreement between the parties to support each other during a predefined event, e.g. an economic attack. The means of such defence would be in the form of mutual aid.

There are five broad categories of mutual aid, each with their own benefits and obstacles to implementation:

Tariffs: Allied nations could establish a means of using tariffs to counter tariffs imposed by an aggressor. While the value of tariffs in changing geopolitical calculation is debatable, they are nonetheless a tool and provide a clear means of reciprocation. Such tariffs would ideally be done in conjunction with the WTO but would not rely on the WTO for execution.

Subsidisation: An option that may be more difficult to execute would be the creation of a pool of capital to support targeted nations in order for them to withstand economic attacks through subsidised trade. For example, as with the World Bank and International Monetary Fund (IMF), allied nations could fund an organisation which could then release loans to targeted nations, industries or even individual businesses when they are subject to coercion.

Strategic import/export: Economic coercion can be executed through simple slowdowns in imports and exports, which can be hard to trace and counter as they may not be accomplished through explicit government policy as when imposing tariffs. Defence against import and export manipulation can be achieved through agreements to increase imports or exports of relevant goods during the effected time period. This would be particularly complex, as allies would have to be able to clearly delineate what is an import/export issue due to purposeful economic coercion and what was due to pure economic reasons, such as the imported good no longer being as attractive relative to competing goods. Moreover, such agreements would likely need to be targeted at specific companies, rather than states.

Strategic reserves: Oftentimes economic warfare involves the withholding of essential materials, such as when China cut off Japan from its supply of rare earths in 2011. Such attacks could be mitigated by the creation of strategic reserves which could then be released as necessary to mitigate supply attacks. The reserves could be held by individual nations with an agreement to share as necessary or centrally held by a single nation or multinational organisation.

Investment, mergers and acquisition rules and enforcement: Oftentimes, adversarial investments and mergers and acquisitions are used to undermine a nation's economy or individual companies. While the US has developed a significant defensive system through its Committee on Foreign Investment in the United States (CFIUS) and other policies, as have other countries, some nations do not currently implement the economic mechanisms necessary to regulate adversarial capital in a similar manner. Jointly enforcing rules and norms to defend against predatory capital would be another form of mutual aid.

All of these categories of mutual aid would be—and should be—highly debated at both domestic and international levels. Domestic economic pressures will come from affected businesses and other groups. Political pressures will mount due to the required spending and creation of new alliance networks. Clearly additional study is necessary to not only determine the right alliance structures but also how to implement them. Doing so will require more robust economic analysis and intelligence capability so that diplomats and policymakers can understand the economic statecraft dynamics and better determine the right policies. Additionally, implementation will require shifting the debate around some of the tariff and subsidisation questions from economic issues to national security justifications.

In all cases, the goal of mutual aid should be its use as a deterrent. Creating an economic warfare deterrent requires predictability of response. Any economic alliance must be explicit about what sort of actions and circumstances will lead to mutual aid, while remaining strategically ambiguous about the specific response and degree of response. The purpose being to change the calculations of an aggressor such that an economic attack will appear to have a lower probability of achieving its aim. Additionally, just as with military alliances, if mutual aid is called upon, the alliance must act, in order to set the precedent and ensure future perceptions. No doubt, aggressors will probe to find the boundaries of alliances, and these boundaries must be defended through action. Ultimately, democratic nations will require the internal capacity, or capacity shared within a block of democratic nations, to withstand economic coercion and economic warfare.

The world is entering a period of rapid evolution in economic statecraft driven by the rise of China, economic devastation from COVID-19 and geopolitical flux within the US, EU, the UK and other nations. Such evolution is driving new offensive approaches and in turn this must drive defensive measures. Reform and new approaches at entities like the WTO may help in certain areas but more immediate and tailored solutions are necessary. Mutual aid alliance regimes should be explored as the most direct path toward (re) creating the deterrence necessary to minimise destructive economic coercion. ■

UK and European Capability Building in Response to China's Technology Surge

JONATHAN LIEBENAU

> The West still outperforms China in most areas of advanced technology. However, it should be recognised that it has much to learn about how it lost the lead in others.

China's technology surge to dominance in a few sectors is the consequence of a set of concrete factors that either exist already in Europe, can be created, or used to exist and can be revived. This section describes this surge, analyses its significance and offers recommendations for a response by the UK and European Union members.

The successful drive toward technology dominance

A significant shift in China's technology and industrial policy emerged around forty years ago with an interpretation of the 'four modernisations' of Deng Xiaoping that set the stage for a boom in private and semi-private technology companies, foreign direct investment, special economic zones and capitalist business practices over the following ten years. By the 1990s, Communist Party technology policies were clearly married to industrial policy and concrete strategies emerged to accelerate technology transfer, divert resources to build science and technology capabilities and create both domestic and export markets for Chinese high technology goods. Investments from Germany and the United States, but especially those that brought development models with them from Japan and South Korea, were especially influential in shaping both the character and the focal areas of technology development. While companies such as Siemens and General Motors were important during this period, investments by firms such as Sony (operating as Chengdu Sobey Digital Technology), Panasonic (parts of its Sanyo business were later acquired by Haier), SK and Hyundai provided models not only of efficient product assembly but also of technology transfer and innovation. American management theory began to prevail.

The new wave of private high technology and digital services companies date from the late 1980s when Huawei was established, through to the late 1990s when Alibaba, Baidu and Tencent were built, all of which soon came to emulate mainly American firms such as Cisco, Amazon, Google and Facebook. During this period and shortly afterwards, a series of major technology companies were established or grew out of state-owned enterprises, such as the army-linked China Electronics Technology Group, which itself spun off one of China's two leading surveillance equipment and services firms: HIKVision. ZTE, Haier and China's three dominant telecommunications services companies, China Mobile, China Telecom and China Unicom all originated as entirely state-owned enterprises. A further group of private companies also followed, such as Dahua Technologies—the other of the two leading surveillance equipment and services firms—and the leading drone manufacturer: DJI (Shenzhen Great Frontier Innovations Science and Technologies Company). With relatively easy access to capital from state banks, these firms grew quickly and most invested in R&D on a scale comparable to their American counterparts. While their governance ranged widely from wholly private to wholly state-owned, all have conducted business largely in step with Chinese industrial, security and technology policy.

Three features of US, European and Japanese industrial development coincided with this initial wave of Chinese business development during that 20-year period: the push to exploit outsourcing and offshoring opportunities, the associated improvements in supply chain logistics and an onset of stasis or atrophy associated with the period from the technology downturn from the end of the dot-com boom through the telecom bust that followed and beyond the financial services crisis of 2008. While US digital services companies continued to grow, formerly world-leading US manufacturers such as Cisco and Lucent (both in telecommunications equipment), IBM computers, Corning (optical fibre), 3Com (which was acquired by another ailing company, Hewlett-Packard), Xerox, Motorola, and many others were sold, in relative decline or actually shrinking. Similar fates met the leading Canadian high technology firms Nortel Networks and BlackBerry, the major German firm Siemens, Olivetti in Italy, Alcatel in France and Britain's International Computers Ltd [ICL]. Many Japanese and South Korean technology leaders also lost their reputations as innovators during this period, with the singular exception of Samsung.

There is no simple explanation for this loss of leadership in digital technologies manufacturing outside of China. However, the coincident growth of the Chinese firms was fuelled by the dramatic rise of China's GDP and policies that supported it from many directions including domestic civil and security services procurement, easy access to finance, a boom in engineering education, direct funding through the Chinese Academy of Sciences and industrial and trade policies that favoured digital technologies. Most of these were associated with infrastructure development including advanced manufacturing (so-called industry 4.0), transport, logistics and distribution, the roll-out of 'smart city' schemes and associated surveillance and security applications. It benefitted from many experiments, failures as well as successes, in corporate management and governance. Some of these are associated with leading innovation practices such as those at Xiaomi and Huawei in knowledge management, Alibaba and JD.com in supply chain management, and a variety of company incentive schemes aimed at innovators. While nefarious activities associated with intellectual property theft, industrial espionage and anticompetitive practices have not been uncommon, they contributed in value-added relatively little to the growth outcomes of factors described above.

What this means for international competition

China's challenge to technology dominance is focused on a short list of key areas mainly linked to infrastructure and include mobile telephony (network as well as mass market equipment), electric and autonomous vehicles, surveillance technologies, drones, mass transport and construction technologies. The last two were primarily spurred by domestic requirements and have only recently entered international competition, mainly in emerging market economies. Their dominance in surveillance technologies is motivated by both the availability of masses of data that is legally restricted or difficult to use in other countries and by the huge market domestically and abroad primarily from security services. The concomitant machine learning, control and automation technologies fuel the bid for dominance in drones, electric and autonomous vehicles and are enabling capabilities associated with 5G services and the 'internet of things'. Domestic laws and regulations, many of them at variance or even anathema for Western nations play a part, also. For this reason, these factors should be considered as interrelated and associated with skills in labour markets, business development and national R&D activities as well as technology policy. One facilitating factor is the use of technical standards, an area of engineering that had been dominated by Western and Japanese firms through multilateral organisations such as the international standards setting bodies. The recent American-led pressure to diminish the role of multilateral bodies provided Chinese firms opportunities to extend their influence within such institutions.

The UK and the rest of Europe have long been influential in standards bodies as well as institutions of law and regulation that will in the coming years form increasingly critical foundations to digital technologies. Along with the United States and Japan, European companies have also led in robotics and advanced manufacturing and still hold the lead in most areas of machine learning and the other most advanced areas of software technology. Chinese improvements in these areas, as measured by research outputs and new product introductions, are in contention for leadership but by most criteria still lag.

It is crucial for policy makers as well as industry leaders to be well aware of these factors as they consider the significance of China's competition. Panicky responses to, for example, the emergence of Huawei as the leader in 5G, overlook the fact that the firm took the technological lead in this area over ten years ago, building on the base of over 30 years of rapid growth. Even if the emergence of such effective competition, largely based on pricing, service qualities or technological leadership, was assisted by nefarious practices, Western nations cannot expect short-term policies that constrain trade, re-design standards or invoke specious security restrictions to re-establish Western technology dominance. Nor will recourse to courts, no matter how well justified legal complaints might be.

What should be done?

The first step toward re-entering competition in technology with China is to understand better how China came to this position of strength. Western nations should look beyond complaints of unfair practices and recognise that Chinese companies have enjoyed recent successes based on over twenty years of strategic practices. The West should learn better from Chinese companies' practices of long-term finance and planning, taking lessons from (and tolerance for) failed business experiments and setbacks, and sophisticated labour market and management developments. These are all found in the best of Western business practices. However, they are too rare and they have not been allowed to dominate Western economies. Western nations should also return to an attitude toward government in its judicious use of regulations and market shaping activities that, within the West's legal and civic norms, can achieve what the Chinese Communist Party achieves through autocracy. These include judicious use of large-scale projects such as urban development, transportation and information infrastructure that foster mechanisms likely to have spill-over effects that strengthen technology businesses. Countries should find ways that advance technological applications that are the reverse of the experiments in repression such as those applied in Xinjiang: surveillance and artificial intelligence for traffic control rather than social control, monitoring individuals to effect vaccine distribution rather than withholding rights.

It seems unlikely that short-term tax incentives and 'business friendly environment' policies will do much to address these larger, longer term requirements. Measures such as freeports do little more than redistribute resources or provide very localised boosts while the rest of industrial policy sets out on a race to the bottom.

The West still outperforms China in most areas of advanced technology. However, it should be recognised that it has much to learn about how it lost the lead in others. It is most important that democratic nations strengthen and build upon those institutions that underlie technological success. These include existing institutions of law and trade, standards and civic virtue. They also require us to reconsider how countries should plan for their national futures, strengthen their labour force, cooperate and find consensus to prioritise innovation. One can look to, and build upon, bodies such as the Crick and Turing Institutes in London as one kind of model, and aspects of France's transportation policy as another. German technology law is in parts exemplary. But these need to be scaled appropriately, sustained and constantly improved. A short-term enthusiasm for an outer-space project, a flurry of subsidies for fashion and industrial design, and great expectations of spill-over from prowess in vaccine development are all well and good, but there is little room for optimism when one watches political capital frittered away in squabbles over fisheries while the foundations of our economies are undermined. ■

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