

BREAKING THE CHINA SUPPLY CHAIN: HOW THE 'FIVE EYES' CAN DECOUPLE FROM STRATEGIC DEPENDENCY

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WITH A FOREWORD BY RT. HON. GISELA STUART &
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AND RESPONSES FROM ANDREW HASTIE MP, HON. PETER MACKAY,
SENATOR MARCO RUBIO & BOB SEELY MP



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Front Cover: Product bar code symbolizing the massive amounts of imported goods from China by Digital Storm. Royalty-free stock photo ID: 77410501. <https://www.shutterstock.com/image-photo/product-bar-code-symbolizing-massive-amounts-77410501>.

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Foreword

The COVID-19 crisis may have caused much of the world to stop, but it should not stop us from thinking.

In the fields of economics, the environment, justice, and inequality, approaches we once took as articles of faith are now being reassessed.

This fundamental rethink is also overdue in the great foreign policy questions of our time. In the light of this current crisis, none of those debates is more pressing than how we handle the People's Republic of China.

For three decades, Western nations have pursued a policy of strategic engagement with China. We hoped that by trading and engaging ever more closely with China, it would open up and move towards democracy over time. In fact, if anything, China has become steadily more authoritarian.

This geopolitical endeavour took place in concert with the wider process of globalisation which shifted the international economic playing field.

These processes have carried costs. Jobs once done by proud working men and women who enjoyed fair pay, employment security, and good working conditions, have been lost.

This would be regrettable — if understandable — if these jobs had gone to workers in other countries who outcompeted Western producers. The situation becomes intolerable, however, when those jobs were lost to trade practices that were neither fair nor balanced.

As this paper helpfully illustrates, we have gradually arrived at a situation in which China has assumed overwhelming dominance of the export of certain manufactured products.

China has long shown a willingness to threaten the prosperity of those who question its activities. The seriousness of such threats grows when our economic system leaves us strategically dependent on China to keep our economy turning.

Our leaders have known this. Many question if our dependency on China — as well as our desire to solicit further investment from them — has led us to stay quiet on human rights.

Inverting our priorities in this way has not been without a human cost. At times, we sat idly by, as the Chinese Communist Party has persecuted the Uyghurs, the Tibetan people, the Falun Gong, Hong Kong, lawyers, activists, and above all its own people.

We have looked the other way as China militarised the South China Sea. Our desire to show leadership on environmental issues has been undermined by the impunity China has enjoyed as it has polluted the world as it produces the goods we enjoy.

Writing as two former senior representatives from left-wing parties, this seems profoundly wrong to us. The time has come to view China with clear eyes, openness and honesty. Now is also the time to ask whether, given all we now know, it is so prudent to rely on China for so much of our critical national infrastructure.

None of this is to say that the people of China or people of Chinese-descent who live outside of China are in any way at fault. Indeed, many have been the targets of shameful attacks that we must all disavow. Nor is it to say that we should cease to trade with China or rebuff offers of investment.

Rather, as we rebuild our world from this present upheaval, the time has arrived for us to make trade and investment decisions with thought not just on finances but on security and human rights.

China will remain a part of our future. But it is time to put our strategic interests first, and to remind the world that our values are not for sale and that we will no longer brook any compromises about asserting them.

Rt Hon. Gisela Stuart
Labour Member of Parliament 1997-2017

Hon. Michael Danby
Labour Member of Parliament 1998-2019
Past Chairman of the Parliamentary Joint Committee on Foreign Affairs, Defence and Trade

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Executive Summary

- Since the end of the Cold War, the United Kingdom (UK), United States (US), Australia, Canada and New Zealand – the five powers commonly known in intelligence circles as the “Five Eyes” – have been among the leading advocates of “hyper-globalisation”, the idea that markets should prevail over almost all other considerations. China has benefited disproportionately from this form of globalisation, leading to a fundamental transformation in its economic and industrial fortunes over the past two decades.
- Although already well-established in the US, the idea of “decoupling”, particularly from China’s economy, has gained currency with the COVID-19 crisis. The inability to produce and source Personal Protective Equipment via globalised supply chains has reminded democratic governments and peoples that it is necessary to be able to produce strategic commodities, just as China’s actions and behaviour have reminded them of the authoritarian nature of the Chinese Communist Party (CCP).
- Under Xi Jinping’s leadership, the CCP has already used China’s economic power as a geostrategic weapon to revise the rules-based international system. Now vulnerable to rising domestic and international criticism over its handling of the COVID-19 outbreak, the CCP has adopted a policy of aggressive defence, to the extent that it is exploiting accumulated economic dependencies for political gain. While the rest of the world remains focused on combatting COVID-19, China is pushing forward with strategic campaigns to dominate all major sectors of global trade, and by degrees to take over control of international market standards.
- Building on the five powers’ attempts – through the “Critical 5” international forum – to create a shared understanding of “critical infrastructure” and their identification of next-generation industries, this report reviews the extent of the five powers’ dependency on China across 5910 sets of data drawn from the United Nations International Trade Statistics Database.
- Employing a new definition for “strategic dependency”, this report finds that the five powers are strategically dependent on China in 831 categories of goods. Australia is strategically dependent on China for 595 categories; Canada, 367; New Zealand, 513; the UK, 229; and the US, 414. Strategic dependency is identified when a country is a net importer of a particular good, it imports more than 50% of its supplies from China, and China controls more than 30% of the global market of that particular good.
- Comparing these goods with the common understanding of critical national infrastructure among the five powers, the report finds that one or more of these powers is strategically dependent on China in 260 categories of goods that service critical applications. In Australia this applies to 167 categories; in Canada, 83; New Zealand, 144; the UK, 57; and the US, 114.
- China, for example, is the world’s largest producer of active pharmaceutical ingredients (APIs), and each of the five powers is dependent on drugs that are either imported from China or include APIs imported from China. China also produces the bulk of the world’s health-related products, and three of the five powers are dependent on China for Vitamin C. The centralisation of these global supply chains makes them vulnerable to interruption, whether by mistake or design. The supply chains can also be weaponised.
- Further, by looking ahead to the next-generation industries most crucial to the “Fourth Industrial Revolution”, the report finds that in 57 categories of goods at least one of the

five powers is strategically dependent on China. Australia and New Zealand are each strategically dependent on China for 35 categories of goods; the US and Canada for 25; while the UK is strategically dependent on 12.

- China produced 80% of global magnesium in 2018, and magnesium's properties, as well as those of magnesium compounds, mean that it will be central to innovation in energy, transport, construction, computer and other next-generation industries. Because of this, Australia, the UK, and the US class magnesium as a critical material. Yet, four of the five powers are dependent on Chinese imports for their supplies. No new (as opposed to recycled or reclaimed) magnesium is made in western Europe, and there is only one company left in the US making new magnesium from local raw materials (as opposed to via recycling).
- By way of a conclusion, this report introduces three forms of “decoupling” – “negative”, “positive” and “cooperative” – the five powers could undertake to help them, as well as their allies and partners, reduce their growing industrial dependency on China. Before such action is taken, however, the five powers need to understand the extent of their economic dependency on China. As such, this report recommends that each country should, as a matter of urgency:
 - Conduct and publish audits at national and company level, so as to identify where dependency on China exists in relation to raw materials, components and complex supply chains;
 - Undertake a national review of strategic industries to identify and prioritise those that require protection from dependency on China;
 - Review bilateral investment treaties and free trade agreements, to assess how effectively they manage risk from strategic dependency on China;
 - Review existing trading partnerships to identify ways in which increased cooperation could reduce strategic dependency on China.
- The report ends with four essays, written by current or former politicians from four of the five powers. In these essays, the authors offer their views on their respective country's responses to the issues raised in this report.

1. Introduction

The Chinese Communist Party's (CCP) mishandling of the COVID-19 outbreak lays to rest the idea that the People's Republic of China can become a responsible stakeholder in the international community. It also calls into question the wisdom of democratic states having allowed themselves to become, since the end of the Cold War, so reliant on Chinese exports as China sought to become the world's premier manufacturing hub.

The United Kingdom (UK), Australia, Canada, New Zealand, and the United States (US) – known commonly in intelligence circles as the “Five Eyes” – have been amongst the powers that have typically championed free trade, the expansion of which over the last three decades has brought great benefits to each.¹ London and New York have entrenched their prominence as “command centres” within the global financial system, while Canada, Australia, and New Zealand have carved out unique roles in the global economy. Although much of the growth has been uneven, the Gross National Income (GNI) of the five countries doubled – or even, in Australia's case, tripled – between 1990 and 2018.²

The world beyond the five powers also prospered – often more so. Between 1990 and 2015, the proportion of the world's people living in extreme poverty – on £1.54 (US\$1.90) or less per day – fell from 36% to just 10%, one of the fastest reductions in human history.³ Few processes have increased economic opportunities in economically challenged regions as fundamentally as globalisation.

Of all the beneficiaries of free trade, China has been among the greatest. Although China had begun to “open up” after 1978 under Deng Xiaoping, then General Secretary of the Chinese Communist Party (CCP), for the first decade or so much of the economy remained under state ownership. As much of the developed world – starting in the UK and the US – deindustrialised and began to globalise its supply chains, China embraced industrialisation and rooted itself into the global economy, to the extent that the country now accounts for almost 30% of global manufacturing capacity, broadly comparable to the UK and the US at their respective industrial apexes in the mid-nineteenth and mid-twentieth centuries, respectively.⁴

Consequently, China's GNI ballooned between 1990 and 2018 from US\$374 billion to US\$13.2 trillion – an almost 35-fold increase.⁵ The country's GNI per capita exploded from US\$330 to US\$9,460 over the same time frame, transforming China from a “low-income” to an “upper-middle income” country.⁶

Yet even as China's industrialisation appeared to go hand in hand with deindustrialisation in the UK and the US, Western policymakers continued to embrace Beijing, mistakenly thinking that increasing trade would – in time – lead to Chinese political reform. It was anticipated that

¹ In this report, the five countries are referred to as “the five powers”.

² ‘GNI, Atlas method (current US\$) – Australia, Canada, New Zealand, United Kingdom, United States’, *The World Bank* (2018), available at: <https://data.worldbank.org/indicator/NY.GNP.ATLS.CD?end=2018&locations=AU-CA-NZ-GB-US&start=1990>, last visited: 5 May 2020.

³ ‘Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)’, *The World Bank* (2018), available at: <https://data.worldbank.org/indicator/SI.POV.DDAY>, last visited: 5 May 2020.

⁴ Richter, F., ‘These are the top 10 manufacturing countries in the world’, *World Economic Forum*, 25 February 2020, available at: <https://www.weforum.org/agenda/2020/02/countries-manufacturing-trade-exports-economics/>, last visited: 5 May 2020.

⁵ ‘GNI Atlas method (current US\$) – China’, *The World Bank* (2018), available at: <https://data.worldbank.org/indicator/NY.GNP.ATLS.CD?end=2018&locations=CN&start=1990>, last visited: 5 May 2020.

⁶ Beer Prydz, E. and D. Wadhwa, ‘Classifying countries by income’, *The World Bank*, 9 September 2019, available at: <https://datatopics.worldbank.org/world-development-indicators/stories/the-classification-of-countries-by-income.html>, last visited: 5 May 2020.

economic modernisation in China would lead to an urban middle class that would begin to demand political enfranchisement, leading ultimately, if not to the replacement of the CCP, then certainly to reforms and a more open and plural political system.

But, despite political restructuring in the 1990s – such as the imposition of term limits on general secretaries – and the emergence of a large Chinese middle class, the anticipated democratic reforms have not materialised. Instead, the CCP invested the wealth generated by industrialisation to extend its political control, both at home and abroad. Indeed, following the appointment of Xi Jinping as General Secretary of the CCP in 2012, China has lurched back towards outright dictatorship: general secretaries' term limits have been rescinded, democracy has been declared an adversary, and dissent has been suppressed with growing vigour. Internationally, China has challenged the rules-based international order, most brazenly through its rejection of the United Nations Convention on the Law of the Sea, particularly in the South China Sea.⁷

Most importantly, China has also played by its own economic rules. Chinese manufacturers have undercut successive industries in the five powers not only by outcompeting, but also by cheating. Chinese industry has thrived by stealing intellectual property (IP) on an unprecedented scale, and by benefiting from unequal investment practices imposed on foreign companies operating in China. (Chinese industry has also ignored environmental restrictions that apply to wealthier nations' competitors.) Having benefited from the hyper-globalisation that began following the end of the Cold War, the CCP has now started to develop a new global economic order centred on its own authoritarian control, not least through the so-called 'Made in China 2025' and 'China Standards 2035' national economic strategies.⁸

As they embraced hyper-globalisation, the five powers have become progressively dependent on China for the supply of various manufactured goods. Indeed, China surpassed the US as the world's largest exporter of goods and services in 2017;⁹ from 2000, China also overtook America as a larger supplier of goods to every country surrounding the Indian and Pacific Oceans, with the exception of those in North and Central America.¹⁰ Today, these goods are no longer mainly low-grade items such as toys, clothing and footwear, but they are increasingly more-advanced products such as computers, mobile phones, chemicals, and pharmaceuticals.

If it was not already apparent, the COVID-19 pandemic has drawn attention to the dangers that dependency poses. The five powers have found it difficult to source the necessary volumes of medical equipment, either because China has commandeered such products for its own requirements¹¹ or because the five powers have been forced to compete for limited supplies of such goods. As if a curtain has been drawn back, the five powers and their partners are now considering whether being coupled to China is sensible. The strategy of “decoupling”

⁷ See Hemmings, J. and J. Rogers, 'The South China Sea: Why it matters to "Global Britain"', *Henry Jackson Society*, 6 February 2019, available at: <https://henryjacksonsociety.org/publications/the-south-china-sea-why-it-matters-to-global-britain-2/>, last visited: 5 May 2020.

⁸ See Zenglein, M. J. and A. Holzmann, 'Evolving Made in China 2025', *Merics*, 2 July 2019, available at: <https://www.merics.org/en/papers-on-china/evolving-made-in-china-2025>, last visited: 5 May 2020; De la Bruyere, E. and N. Picarsic, 'China Standards 2035: Beijing's Platform Geopolitics and "Standardization Work in 2020"', *Horizon Advisory*, April 2020, available at: <https://www.horizonadvisory.org/china-standards-2035-first-report>, last visited: 5 May 2020.

⁹ From 2010 to 2018 (latest available figures), China and the US have jostled for position of the world's largest exporter of goods and services. China held top position from 2013 to 2015 and from 2017-2018. See: 'Exports of goods and services (current US\$) – United States, China', *The World Bank* (2020), available at: https://data.worldbank.org/indicator/NE.EXP.GNFS.CD?end=2018&locations=US-CN&most_recent_value_desc=true&start=2010, last visited: 5 May 2020.

¹⁰ Ghosh, I., 'How China Overtook the U.S. as the World's Major Trading Partner', *Visual Capitalist*, 22 January 2020, available at: <https://www.visualcapitalist.com/china-u-s-worlds-trading-partner/>, last visited: 5 May 2020.

¹¹ Bradsher, K. and L. Alderman, 'The World Needs Masks. China Makes Them, but Has Been Hoarding Them.', *The New York Times*, 2 April 2020, available at: <https://www.nytimes.com/2020/03/13/business/masks-china-coronavirus.html>, last visited: 5 May 2020.

has entered the zeitgeist over recent years as commentators have speculated how the US and China might divorce economically in response to increasing commercial antagonism. Of late policymakers worldwide have begun to consider how to untangle their own economies from that of a regime – China – that is looking increasingly untrustworthy.¹²

Before such decoupling can be considered, however, it is necessary to identify the most important areas where the five powers have become heavily dependent on China and to examine how this dependency threatens their national security. That is the purpose of this report.

This report contains six sections. Section two builds on the introduction by providing an overview of “strategic industries”, including those needed to uphold national “critical infrastructure” and to secure the five powers a leading role in the Fourth Industrial Revolution. Section three explains why the five powers’ dependency on China for goods that relate to strategic industries is a risk, not least owing to Beijing’s autocratic surge under Xi Jinping. By examining global trade data, section four shows how dependent on China the five powers have become and examines the specific Chinese strategic industries they have grown dependent on. Section five moves on to consider mitigating options available to policymakers, while section six includes contributions from legislators from each of the five powers

¹² For more on the concept of “decoupling”, see Michta, A. A., ‘The Wuhan Virus and the Imperative of Hard Decoupling’, *The American Interest*, 17 March 2020, available at: <https://www.the-american-interest.com/2020/03/17/the-wuhan-virus-and-the-imperative-of-hard-decoupling/>, last visited: 5 May 2020; Michta, A. A., ‘The Long Hard Road to Decoupling from China’, *The American Interest*, 8 April 2020, available at: <https://www.the-american-interest.com/2020/04/08/the-long-hard-road-to-decoupling-from-china/>, last visited: 5 May 2020.

2. What are “strategic industries”?

Since the eighteenth century, developed countries have treated certain industries as “strategic” because of their role in supporting national defence. These industries initially included iron, textiles, gun-making and shipbuilding, before incorporating more capital-intensive processes as the Industrial Revolution got underway. In the nineteenth century, coal, steel, chemicals, railways and machine tools were included, followed by oil, uranium, aluminium, motor vehicles, aviation and electronics in the twentieth. With the advent of hyper-globalisation and the Third Industrial Revolution after the Cold War, this combination of strategic goods changed substantially to include advanced computers, digital technologies and high-speed mass communication. As the 2020s take hold, it looks set to change again. The defence-industrial sector has continued to matter, but the list of sectors that countries deem to be “strategic” has been expanded to include those that support critical infrastructure and the furtherance of the Fourth Industrial Revolution.

2.1 Industries supporting critical infrastructure

In 2012, Australia, Canada, New Zealand, the UK and the US set up a relatively opaque international forum called the Critical 5. The Critical 5 seeks to “to strengthen cooperation between member countries on addressing the threats to critical infrastructure, as well as to share information, practices and ideas on domestic policy and operational approaches to critical infrastructure protection and resilience”.¹³ After extensive consultation, the Critical 5 proposed a working definition of critical infrastructure in March 2014:

Critical infrastructure, also referred to as nationally significant infrastructure, can be broadly defined as the systems, assets, facilities and networks that provide essential services and are necessary for the national security, economic security, prosperity, and health and safety of their respective nations.¹⁴

The Critical 5 determined that this infrastructure includes at least five components:

1. Communications
2. Energy
3. Healthcare and public health
4. Transportation systems
5. Water (including wastewater and storm water systems)¹⁵

In addition, the members of the Critical 5 included some of their own recognised components:

1. Banking and financial services (excluding New Zealand)
2. Critical manufacturing (excluding Australia, New Zealand and the UK)
3. Emergency services (excluding New Zealand)
4. Food and agriculture (excluding New Zealand)
5. Government facilities (excluding Australia)
6. Information technology (excluding the UK)¹⁶

¹³ See ‘Critical 5: Forging a Common Understanding for Critical Infrastructure’, *New Zealand Treasury*, March 2014, available at: <https://treasury.govt.nz/sites/default/files/2017-12/crit5-narrative-v2.pdf>, last visited: 5 May 2020, p.16.

¹⁴ Ibid, p.2.

¹⁵ Ibid, p.6.

¹⁶ Ibid, p.6.

In a later study, the Critical 5 recognised the clear overlap between the infrastructure itself and the industrial activities – and their supply chains – that underpin it:

The global supply chain and global economy are increasingly important considerations for businesses and government entities because of the reliance of critical infrastructure on materials originating from outside their own borders and the impact of these to national economies. The dependency on resources and raw materials outside of our nations to produce our goods and the products that drive our national economy dictates that we focus on the resilience of global supply chains.¹⁷

It follows, therefore, that all economic sectors that service the components of critical national infrastructure can be considered, to varying degrees, as “strategic industries”. If one of those areas fails or is severely disrupted, other sectors of the economy – as well as the nation writ large – would also be impaired or damaged.

2.2 “Core areas” and the Fourth Industrial Revolution

During the mid-2010s, economists recognised that the technological innovations of the Third Industrial Revolution had the potential to push the world into a new political, social and economic era. In the words of Klaus Schwab, Founder and Executive Chairman of the World Economic Forum:

The First Industrial Revolution used water and steam power to mechanize production. The Second used electric power to create mass production. The Third used electronics and information technology to automate production. Now a Fourth Industrial Revolution is building on the Third, the digital revolution that has been occurring since the middle of the last century. It is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.¹⁸

However, unlike the Third Industrial Revolution, a number of countries have become more reluctant to continue to embrace globalisation as strongly as they did during the immediate post-Cold War era. The paramountcy of innovation, ideas and intellectual property has made the technologies of this emerging industrial revolution particularly vulnerable to theft and capture. “Hostile State Activity” – which has included the wholesale theft of ideas and technology by countries such as China and Russia – has encouraged democratic governments to take measures to protect their countries from undue interference.¹⁹ The five powers have all, to varying degrees, embraced legislation to prevent malicious foreign activity from undermining or taking hold of sectors of their economies and societies, or are considering doing so.²⁰

In the UK, a clear connection has been established between deterring predatory activity and protecting industrial sectors that might further the country’s role in the Fourth Industrial Revolution.²¹

¹⁷ ‘Critical 5: Role of Critical Infrastructure in National Prosperity’, *Cybersecurity and Infrastructure Security Agency* (US), October 2015, available at: <https://www.cisa.gov/sites/default/files/publications/critical-five-shared-narrative-ci-national-prosperity-2015-508.pdf>, last visited: 5 May 2020, pp.6-7.

¹⁸ Schwab, K., ‘The Fourth Industrial Revolution: what it means, how to respond’, *World Economic Forum*, 14 January 2016, available at: <https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/>, last visited: 5 May 2020.

¹⁹ ‘National Security Capability Review’, *HM Government*, March 2018, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/705347/6.4391_CO_National-Security-Review_web.pdf, last visited: 5 May 2020, p.8.

²⁰ For example, the US has long had in place the Foreign Agents Registration Act. Australia adopted the Foreign Influence Transparency Scheme in 2018. The UK government announced its intention to implement to develop measures to tackle hostile activity conducted by foreign countries in the Queen’s Speech on 19 December 2019. New Zealand announced a ban on foreign political donations in December 2019.

²¹ Hemmings, J., ‘Safeguarding Our Systems: Managing Chinese Investment into the UK’s Digital and Critical National Infrastructure’, *Henry Jackson Society*, July 2017, available at: <https://henryjacksonsociety.org/wp-content/uploads/2019/01/HJS-Safeguarding-Our-Systems-Report-NEW-BW-Inner-web.pdf>, last visited: 5 May 2020.

After lengthy consultation involving government, parliamentary committees and business, a Draft Statutory Statement of Policy Intent entitled ‘National Security and Investment’ was published in 2018 by the Department of Business, Energy and Industrial Strategy.²² This identified a number of “core areas” of the economy where foreign acquisition – by companies and entities from hostile states – would be “more likely to pose a national security risk”.²³ Besides economic sectors supporting defence and critical infrastructure, the draft statutory statement identified a cluster of technological areas that should be afforded protection, primarily those considered part of the Fourth Industrial Revolution. These areas are shown in Table 1 (below).

*Table 1: “Core areas” of the future economy (the Fourth Industrial Revolution) as identified by the Department of Business, Energy and Industrial Strategy*²⁴

“Core areas” of the Fourth Industrial Revolution	
Artificial intelligence / machine learning	Autonomous robotics
Computing hardware	Cryptographic technology
Materials and manufacturing science	Nanotechnologies
Networking and data communication	Quantum technology
Synthetic biology	

These industries should also be considered “strategic” because they are expected to provide significant technological and economic benefits to those countries that come to lead in them, including in terms of military superiority and national security. Indeed, the COVID-19 crisis has revealed the extent to which recent and emerging technologies – networked communications, pharmaceuticals and biotechnology – are themselves part of a nation’s critical infrastructure.²⁵

²² See ‘National Security and Investment: A consultation on proposed legislative reforms’, *Department for Business, Energy and Industrial Strategy*, July 2018, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/728310/20180723_-_National_security_and_investment_-_final_version_for_printing__1_.pdf, last visited: 5 May 2020; ‘National Security and Investment: Draft Statutory Statement of Policy Intent’, *Department for Business, Energy and Industrial Strategy*, July 2018, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/728311/20180717_Statement_of_policy_intent_-_shared_with_comms.pdf, last visited: 5 May 2020. In December 2019, the British government outlined in the Queen’s Speech that it planned to proceed with legislation to protect national security by disallowing companies from certain countries to engage in hostile takeovers of British companies that serve critical sectors. See ‘The Queen’s Speech 2019’, *Government Publishing Service*, 19 December 2019, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/853886/Queen_s_Speech_December_2019_-_background_briefing_notes.pdf#page=104, last visited: 5 May 2020.

²³ ‘National Security and Investment: Draft Statutory Statement of Policy Intent’, *Department for Business, Energy and Industrial Strategy*, July 2018), p. 8 and pp.46-57.

²⁴ *Ibid*, pp.51-55.

²⁵ Bettinger, K., ‘COVID-19: Emerging technologies are now critical infrastructure – what that means for governance’, *World Economic Forum*, 10 April 2020, available at: <https://www.weforum.org/agenda/2020/04/covid-19-emerging-technologies-are-now-critical-infrastructure-what-that-means-for-governance/>, last visited: 5 May 2020.

3. Can economic dependency become a threat to national security?

Globalisation is not necessarily in itself a threat to national security. In fact, when all major powers broadly support the rules-based international system, economic interdependence can generate rapid economic growth and reduce poverty, much as it did in the immediate aftermath of the Cold War under the leadership of the five powers.

However, during times of geopolitical tension, or in the face of a global pandemic or a similar challenge, dependency on foreign suppliers can become a threat to national security, particularly if a major supplier emerges as a geopolitical and/or an ideological rival. Dependency can be even more serious where the opponent has a technological lead in relation to a particular industry, because procurement of the goods it produces can serve to entrench the asymmetry and even compound its lead.

This is the situation in which the UK found itself in the early twentieth century. Despite having developed the first synthetic dyes in the mid-nineteenth century, Britain neglected this sector of the emerging Second Industrial Revolution.²⁶ Meanwhile, Germany actively cultivated its chemical industries. This created a virtuous circle that helped Germany to grow wealthier and develop a technological and industrial stranglehold to the extent that by 1900 it was producing 85% of the world's supplies of synthetic dyes.²⁷

For Britain, this dependency became particularly egregious as the geopolitical situation in Europe deteriorated and war broke out in 1914. While Germany had a “chemical weapon” in the form of “thousands of research-trained, technically-experienced industrial chemists”, the UK had become so dependent on German synthetic dyes that it lacked sufficient supplies to produce even its own khaki uniforms.²⁸ For the first few months of the First World War, Britain imported German dyes secretly, using Switzerland as an intermediary – even as it imposed a crippling naval blockade against the German economy.²⁹

A similar situation was repeated on a number of occasions throughout the twentieth century. During the 1930s, concerns were raised about connections between German electrical companies in the UK.³⁰ And during the Cold War, the US warned West Germany not to invest in pipelines linking itself to Soviet oil and gas fields, fearing that Western Europe would become too dependent on Soviet energy supplies and therefore more amenable towards Soviet desires.³¹

Here, the question is not ideological. It is not whether the five powers should sacrifice globalisation to return to protectionism, let alone the extreme ‘autarkic’ measures of the 1930s. Rather, it is a question of first, geopolitics and second, ensuring supplies under extreme global conditions such as pandemics. Is it geopolitically wise for democracies to remain dependent –

²⁶ Zwirn, E., ‘Germany beat the British to dominate dyes’, *ICIS*, 8 May 2008, available at: <https://www.icis.com/explore/resources/news/2008/05/12/9122542/germany-beat-the-british-to-dominate-dyes/>, last visited: 5 May 2020.

²⁷ Ibid.

²⁸ Johnson, J. A., ‘Military-Industrial Interactions in the Development of Chemical Warfare, 1914–1918: Comparing National Cases Within the Technological System of the Great War’, *SpringerLink*, 28 November 2017, available at: https://link.springer.com/chapter/10.1007/978-3-319-51664-6_8, last visited: 5 May 2020.

²⁹ ‘The birth of (synthetic) dyeing’, *The Open University*, 30 August 2019, available at: <https://www.open.edu/openlearn/history-the-arts/history/history-science-technology-and-medicine/history-science/the-birth-synthetic-dyeing>, last visited: 5 May 2020.

³⁰ Rath, K., ‘MI5 feared Siemens staff had Nazi spy links during WWII’, *BBC News*, 26 August 2010, available at: <https://www.bbc.co.uk/news/uk-11081786>, last visited: 5 May 2020.

³¹ Pope, V., ‘West Germans set on Soviet gas’, *The Christian Science Monitor*, 26 August 1981, available at: <https://www.csmonitor.com/1981/0826/082641.html>, last visited: 5 May 2020.

even to facilitate further dependency – on foreign suppliers, particularly when some of those suppliers have grown more authoritarian, dissatisfied and revisionist, as well as determined to secure global technological dominance?

Box 1: The public's perception of over-reliance on China

On behalf of the Henry Jackson Society, Survation undertook a British Polling Council-compliant nationally-representative weighted survey of 1,001 UK adults on 15 and 16 April to ascertain the extent to which they think their country's approach to trade should be reconsidered, particularly when it extends to authoritarian countries such as China:

1. In light of the COVID-19 crisis, to what extent would you support or oppose the UK adopting a tougher trade, investment and security policy towards China as has been adopted by the US over the past several years?

Support – 63%	Oppose – 10%	Undecided – 19%	Don't know – 8%
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2. In light of the COVID-19 crisis, to what extent would you support or oppose the UK government bringing back manufacturing of critical medical supplies to the UK from China?

Support – 62%	Oppose – 12%	Neither – 19%	Don't know – 6%
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3. In light of the COVID-19 crisis, to what extent would you support or oppose the UK government continuing to allow Huawei – the Chinese technology firm – to build the UK's 5G wireless communication network?

Support – 27%	Oppose – 40%	Undecided – 26%	Don't know – 7%
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4. The UK has had a policy of allowing the globalisation of supply chains in key strategic industries such as manufacturing, agriculture, and construction. Which of the following statements reflects your view?

Was right – 23%	Was wrong – 40%	Don't know – 37%
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The current state of international trade has begun to cause political friction in the five powers and their partners. As Box 1 shows, the British public appear to think that Covid-19 has either revealed or confirmed China to be an untrustworthy country, mandating broad changes to economic policy.

3.1 The challenge from China

For much of the 1990s and 2000s, it was assumed that globalisation would have positive implications for countries like China, both economically and politically. This assumption was based on the belief that the industrialisation of China would mirror the experience of many continental European countries, resulting, over time, in a large Chinese middle class. This middle class would then demand political and economic reforms, forcing the CCP to reorient itself and to become more liberal, open and democratic. Finally, China would integrate itself in the rules-based international system. It would, in the words of Robert Zoellick, then US Deputy Secretary of State, become a “responsible stakeholder”.³²

Unfortunately, China has not become a responsible stakeholder. While a large middle class has emerged, the country has neither opened to the world nor democratised in the way many

³² Zoellick, R. B., ‘Whither China: From Membership to Responsibility?’ *US Department of State*, 21 September 2005, available at: <https://2001-2009.state.gov/s/d/former/zoellick/rem/53682.htm>, last visited: 5 May 2020.

had anticipated during the 1990s. In fact, under the leadership of Xi Jinping, China has moved steadily and deliberately towards a form of techno-authoritarianism. As Xi has led China ever further from being a “responsible stakeholder”, he has used China’s expanding material resources and politico-military capabilities to compete with the five powers (especially the US) and other aligned states.

This adversative, revisionist strategy follows the Stalinist path of “continuous struggle”.³³ Mao Zedong, the first General Secretary of the CCP, espoused this to disastrous extremes, Deng Xiaoping held it in check to enable China to become rich and Xi has developed it as a personal leadership model, enabling him to exercise absolute authority over both the Chinese people and China’s geostrategic agenda.³⁴ In the spirit of the famous 2013 ‘Document 9’, a communiqué issued under Xi’s name which defines Western liberal values as a threat to the survival of the CCP,³⁵ Xi commands a multi-layered asymmetric struggle against liberal democratic states in order to surpass and defeat them.³⁶

A combative and critical US administration provides a perfect foil for Xi’s revisionist aims.³⁷ Other Western critics of the CCP’s human rights record and cognate abuses may be accused of hypocrisy or post-colonial arrogance. Exploiting a Party-fostered sense of historical entitlement, and under pressure to rekindle flagging economic growth,³⁸ Xi has set out to replace the US-led rules-based international order and so to restore China’s supposed status as the dominant power in the pre-nineteenth century world.³⁹

Xi’s 2017 Davos speech can be seen as a turning point in his self-identification with the rise of China. In this speech he portrayed the People’s Republic as a benign nascent superpower, more willing than the US to help the developing world.⁴⁰ The main vehicle for promoting this view in practice has been Xi’s Belt and Road Initiative (BRI) and its digital component. Though claiming to provide “win-wins” for all,⁴¹ Xi has employed the gamut of asymmetric warfare techniques, from hard power in the China Seas, sharp power coercion in vulnerable client states, soft power ‘divide and rule’ (particularly obvious in Europe), and infiltration of state and private institutions wherever the CCP has seen easy gains to be made. It has been claimed that the CCP operates as a nationalist ruling entity with no need for allies.⁴² Other states are framed as rivals to be subverted or clients to be exploited in pursuit of the same CCP objectives.

³³ Aga-Rossi E. and V. Zaslavsky, ‘The Soviet Union and the Italian Communist Party, 1944–8’, in Gori F. and S. Pons (eds.), *The Soviet Union and Europe in the Cold War, 1943–53* (London: Palgrave Macmillan, 1996).

³⁴ Gill, B., ‘Xi Jinping’s grip on power is absolute, but there are new threats to his “Chinese dream”’, *The Conversation*, 27 June 2019, available at: <https://theconversation.com/xi-jinpings-grip-on-power-is-absolute-but-there-are-new-threats-to-his-chinese-dream-118921>, last visited: 5 May 2020.

³⁵ ‘Document 9: A ChinaFile Translation’, *ChinaFile*, 8 November 2013, available at: <https://www.chinafile.com/document-9-chinafile-translation>, last visited: 5 May 2020.

³⁶ Erickson, A., ‘Make China Great Again: Xi’s Truly Grand Strategy’, *War on the Rocks*, 30 October 2019, available at: <https://warontherocks.com/2019/10/make-china-great-again-xis-truly-grand-strategy/>, last visited: 5 May 2020.

³⁷ Gehrke, J., ‘Angry US-China rivalry intensifies despite Trump talk with Xi Jinping’, *Washington Examiner*, 27 March 2020, available at: <https://www.washingtonexaminer.com/policy/defense-national-security/angry-us-china-rivalry-intensifies-despite-trump-talk-with-xi-jinping>, last visited: 5 May 2020.

³⁸ Xie, E., ‘Xi Jinping says revival of Chinese economy must not be bought at expense of the environment’, *South China Morning Post*, 6 March 2019, available at: <https://www.scmp.com/news/china/politics/article/2188852/xi-says-revival-chinese-economy-must-not-be-bought-expense>, last visited: 5 May 2020.

³⁹ Allison, G., ‘What Xi Jinping Wants’, *The Atlantic*, 31 May 2017, available at: <https://www.theatlantic.com/international/archive/2017/05/what-china-wants/528561/>, last visited: 5 May 2020.

⁴⁰ Chang, L., ‘Yearender: Xi’s Vision for a responsible country’, *Xinhua Net*, 22 December 2017, available at: http://www.xinhuanet.com/english/2017-12/22/c_136845932.htm, last visited: 5 May 2020.

⁴¹ Makichuk, D., ‘China’s win-win strategy is paying off: US Scholar’, *Asia Times*, 26 November 2019, available at: <https://asiatimes.com/2019/11/chinas-win-win-strategy-is-paying-off-us-scholar/>, last visited: 5 May 2020.

⁴² Bo, Z., ‘The US is right that China has no allies – because it doesn’t need them’, *South China Morning Post*, 13 June 2016, available at: <https://www.scmp.com/comment/insight-opinion/article/1974414/us-right-china-has-no-allies-because-it-doesnt-need-them>, last visited: 5 May 2020.

The CCP's rapid return to the offensive after declaring a debatable "victory" over COVID-19⁴³ is consistent with the strategic ethos that preceded the pandemic. At the same time, it reflects Xi's sense of risk as leader at a time of national disaster. Draconian control of information,⁴⁴ propaganda claiming the virus originated outside China, and overseas virtue-signalling of China's success reveal how urgently Xi needs to assert authority by means of all the powers at his disposal.⁴⁵ The most important of these is the People's Liberation Army (PLA). Displays of Chinese military strength, including adventurism in contested maritime space, are likely to increase in the short to medium term, with attendant threats to regional or even international security.⁴⁶

China's economic growth had been slowing for at least a decade before the COVID-19 pandemic began.⁴⁷ Xi's interventions in the crisis emphasise the need to maintain reviving economic momentum.⁴⁸ Risk-laden returns to pre-pandemic work patterns⁴⁹ seem designed to ensure that China's economy will recover sooner than the rest of the world can pull itself together. Just how resilient the controlling relationships with client states established under BRI will turn out to be after the pandemic remains to be seen, but there are already indications that many of China's loans will be extremely difficult for its creditors to repay.⁵⁰ The risk that damage to the Chinese economy caused by the COVID-19 pandemic could undermine the stability of the party-state should not be under-estimated, and it is arguable that Western efforts to guard against harms arising from dependency on Chinese exports should take this into account.

China's relations with much of the democratic world are now characterised by "wolf warrior diplomacy"⁵¹ (crude bullying and threats, often made on social media) and contempt for the rule of law, as manifest by the arrest of leading democracy activists in Hong Kong in late April 2020.⁵² On the day after the discharge of Boris Johnson, the British Prime Minister, from hospital following a life-threatening COVID-19 infection, pressure was applied to the UK government to recommit to accepting Huawei into the UK's 5G network.⁵³

⁴³ Tang, D., 'Beijing rush hour back after Xi declares victory', *The Times*, 21 March 2020, available at: <https://www.thetimes.co.uk/article/beijing-rush-hour-back-after-xi-declares-victory-Osn6kkfqs>, last visited: 5 May 2020.

⁴⁴ Jian, M., 'Xi Jinping has buried the truth about coronavirus', *The Times*, 26 February 2020, available at: <https://www.theguardian.com/commentisfree/2020/feb/26/the-reaction-to-the-outbreak-has-revealed-the-unreconstructed-despotism-of-the-chinese-state>, last visited: 5 May 2020.

⁴⁴ Jian, M., 'Xi Jinping has buried the truth about coronavirus', *The Times*, 26 February 2020, available at: <https://www.theguardian.com/commentisfree/2020/feb/26/the-reaction-to-the-outbreak-has-revealed-the-unreconstructed-despotism-of-the-chinese-state>, last visited: 5 May 2020.

⁴⁵ Callick, R., 'How vulnerable is Xi Jinping over coronavirus? In today's China, there are few to hold him to account', *The Conversation*, 19 February 2020, available at: <https://theconversation.com/how-vulnerable-is-xi-jinping-over-coronavirus-in-todays-china-there-are-few-to-hold-him-to-account-131760>, last visited: 5 May 2020.

⁴⁶ Jennings, R., 'China Sends Ships, Planes over Disputed Seas to Show Strength after COVID-19 Outbreak', *VOA News*, 25 March 2020, available at: <https://www.voanews.com/east-asia-pacific/china-sends-ships-planes-over-disputed-seas-show-strength-after-covid-19-outbreak>, last visited: 5 May 2020.

⁴⁷ Mourdoukoutas, P., 'China Is Heading For A Long Growth Recession, Not Because Of The Trade War', *Forbes*, 31 October 2019, available at: <https://www.forbes.com/sites/panosmourdoukoutas/2019/10/31/china-is-heading-for-a-long-growth-recession-not-because-of-the-trade-war/#7d41f468649c>, last visited: 5 May 2020.

⁴⁸ 'China's Xi worried about virus measures' economic effect: Report', *Al Jazeera*, 11 February 2020, available at: <https://www.aljazeera.com/ajimpact/china-xi-worried-virus-measures-economic-effect-report-200211072529543.html>, last visited: 5 May 2020.

⁴⁹ Tang, H., 'China's return to work is good news for the economy - but it also risks unleashing a second wave of Covid-19 infections', *South China Morning Post*, 3 March 2020, available at: <https://www.scmp.com/comment/opinion/article/3053019/chinas-return-work-good-news-economy-it-also-risks-unleashing>, last visited: 5 May 2020.

⁵⁰ Pandey, A., 'Coronavirus could force China to rein in Belt and Road ambitions', *DW*, 17 April 2020, available at: <https://www.dw.com/en/coronavirus-could-force-china-to-rein-in-belt-and-road-ambitions/a-53159033>, last visited: 5 May 2020.

⁵¹ Allen-Ebrahimian, B., 'China's "Wolf Warrior diplomacy" comes to Twitter', *Axios*, 22 April 2020, available at: <https://www.axios.com/china-diplomacy-twitter-7a6b8287-f7f0-4dc1-be8a-0eb146b111bc.html>, last visited: 5 May 2020.

⁵² 'Escalating Attacks on Hong Kong's Rule of Law and Freedoms!' *HRIC*, 21 April 2020, available at: <https://www.hrichina.org/en/press-work/statement/escalating-attacks-hong-kongs-rule-law-and-freedoms>, last visited: 5 May 2020.

⁵³ Corera, G., 'Coronavirus: Huawei urges UK not to make 5G U-turn after pandemic', *BBC News*, 13 April 2020, available at: <https://www.bbc.co.uk/news/technology-52189281>, last visited: 5 May 2020.

If risks to the stability of the Chinese state, as a result of the COVID-19 pandemic, are not realised, it is likely that the CCP will continue to forge ahead with two major policy campaigns designed to promote and consolidate China's bid for world economic domination.

The first of these is the 'Made in China 2025' campaign,⁵⁴ launched in 2013 as a development of the 'Going Out' strategy that began in the 1990s. This aims to transform Chinese industry such that it will speedily assume a controlling position in global production chains. This policy builds on the success of an earlier policy that identified "Seven Strategic Industries"⁵⁵ for modernisation, leading to ongoing Chinese investment in and penetration of foreign research and development efforts and the acquisition of many foreign technology-based companies.⁵⁶ 'Made in China 2025' extends beyond this to revitalise the entire economy through policies that still include investment abroad, but now seek to enable intensified Chinese competition across the full range of world markets.⁵⁷

The second is 'China Standards 2035',⁵⁸ which has been described as a new industrial strategy to win China control of global standards as a means to dominate the international economic order. This has its origins in the 'National Standardisation Strategy', adopted after China joined the World Trade Organization (WTO) in 2001.⁵⁹ An initial year of scoping exercises and planning has recently ended. In October 2019, Huawei sponsored a high-level conference, hosted by a University of Cambridge college, to explore the concept of a WTO-like framework to promote international governance and standards for regulating the internet and promoting cybersecurity. It appears that one of the aims of this event was to frame China as an aspiring force and proponent of new standards for running the internet (as it is currently doing at the UN's International Telecommunication Union⁶⁰). 'China Standards 2035' marks a qualitative step in China's ambitions to challenge the current world order, as it moves from subverting existing rules to replacing them with its own. Control of new global trade standards would give a country with such control enormous advantages as a competitor, not least because of the advantages it would also give to its clients.

3.2 The commercial challenge from China

At the same time as posing a geopolitical challenge to the West, China poses an economic challenge. Since joining the WTO, China has actively overlooked the Organization's rules on state-subsidy programmes by refusing to complete a tally of all of its subsidies. Western countries have complained that this lack of transparency gives Chinese companies an unfair advantage and has led to an overproduction of goods which have been dumped into world markets.⁶¹ The Chinese government also financed companies through state-directed lending, direct investments, tax breaks, and local government incentives.

⁵⁴ Zenglein, M. J. and A. Holzmann, 'Evolving Made in China 2025', *Merics*, 2 July 2019.

⁵⁵ Ban, V., 'China Names Latest "Strategic Emerging Industries"', *Global Policy Watch*, 6 March 2017, available at: <https://www.globalpolicywatch.com/2017/03/china-names-latest-strategic-emerging-industries/>, last visited: 5 May 2020.

⁵⁶ 'How China's Economic Aggression Threatens the Technologies and Intellectual Property of the United States and the World', *White House Office of Trade and Manufacturing Policy*, July 2018, available at: <https://www.whitehouse.gov/wp-content/uploads/2018/06/FINAL-China-Technology-Report-6.18.18-PDF.pdf>, last visited: 5 May 2020.

⁵⁷ Kennedy, S., 'Made in China 2025', *Center for Strategic and International Studies*, 1 June 2015, available at: <https://www.csis.org/analysis/made-china-2025>, last visited: 5 May 2020.

⁵⁸ De la Bruyere, E. and N. Picarsic, 'China Standards 2035: Beijing's Platform Geopolitics and "Standardization Work in 2020"', *Horizon Advisory*, April 2020.

⁵⁹ Ping, W., W. Yiyi and J. Hill, 'Standardization Strategy of China – Achievements and Challenges', *East-West Center Working Papers*, January 2010, available at: <https://www.files.ethz.ch/isn/134350/econwp107.pdf>, last visited: 5 May 2020.

⁶⁰ Murgia, M. and A. Gross, 'Inside China's controversial mission to reinvent the internet', *Financial Times*, 27 March 2020 available at: <https://www.ft.com/content/ba94c2bc-6e27-11ea-9bca-bf503995cd6f>, last visited: 5 May 2020.

⁶¹ Martina M. and D. Lawder, 'Exclusive: China offers to end market-distorting subsidies but won't say how', *Reuters*, 14 February 2019, available at: <https://uk.reuters.com/article/us-usa-trade-china-subsidies-exclusive/exclusive-china-offers-to-end-market-distorting-subsidies-but-wont-say-how-idUKKCN1Q32X6>, last visited: 5 May 2020.

Chief among Western complaints about the commercial conduct of China have been claims of audacious theft of intellectual property from Western firms. Such claims have kept the US judicial system busy for many years. One product, titanium dioxide, is a case in point. The compound, which is used to create “brilliant white” dyes and pigments, has become a lucrative global commodity. Two principle methods exist to manufacture the compound: the “sulfate batch process” and the far more efficient “chloride route”.⁶² The chloride route has long been utilised by American producers, chiefly the DuPont Company, which guards the secret protocols of its manufacturing process closely. In 2014, a US national of Chinese origin, Walter Liew, was sentenced to 15 years’ imprisonment,⁶³ having been convicted of stealing DuPont’s secrets and selling them to China’s Pangang Group.⁶⁴ Liew’s diaries, which were disclosed at trial, showed he began his activities after conversations with a senior Chinese State Council official.

Other instances of citations relating to alleged intellectual property theft include a Chinese wind turbine manufacturer fined \$1.5million;⁶⁵ a Chinese-national resident in America who pleaded guilty to hacking Boeing in order to obtain sensitive military information⁶⁶ and a Chinese state-owned computer-chip manufacturer placed on the Entity List⁶⁷ and which has pleaded not guilty⁶⁸ to charges that it stole dynamic random access memory technology from US firm Micron.⁶⁹ In all, the US Federal government has brought dozens of complaints through various legal means against individuals and organisations linked to intellectual property theft whose ultimate beneficiary was China. Such is the scale of China’s intellectual property theft that the US-based Commission on the Theft of American Intellectual Property estimated in 2017 the annual cost to the US economy to be \$600 billion.⁷⁰ (The Commission’s 2013 report put the figure at closer to \$300 billion.⁷¹) The Commission has branded China the “world’s principal IP infringer”.⁷²

Other concerns exist over unequal investment practices between establishing commercial entities in China and in the five powers. Chinese law has previously faced criticisms over claims

⁶² Quentin Wilber, D., ‘Stealing White: How a corporate spy swiped plans for DuPont’s billion-dollar color formula’, *Bloomberg*, 4 February 2016, available at: <https://www.bloomberg.com/features/2016-stealing-dupont-white/>, last visited: 5 May 2020.

⁶³ ‘Walter Liew Sentenced to Fifteen Years In Prison For Economic Espionage’, *United States Department of Justice, Northern District of California*, 11 July 2014, available at: <https://www.justice.gov/usao-ndca/pr/walter-liew-sentenced-fifteen-years-prison-economic-espionage>, last visited: 5 May 2020.

⁶⁴ ‘US man sentenced for selling DuPont secrets to China’, *BBC News*, 11 July 2014, available at: <https://www.bbc.co.uk/news/world-asia-china-28258454>, last visited: 5 May 2020.

⁶⁵ Office of Public Affairs, ‘Court Imposes Maximum Fine on Sinovel Wind Group for Theft of Trade Secrets’, *The United States Department of Justice*, 6 July 2018, available at: <https://www.justice.gov/opa/pr/court-imposes-maximum-fine-sinovel-wind-group-theft-trade-secrets>, last visited: 5 May 2020.

⁶⁶ Office of Public Affairs, ‘Chinese National Pleads Guilty to Conspiring to Hack into U.S. Defense Contractors’ Systems to Steal Sensitive Military Information’, *The United States Department of Justice*, 23 March 2016, available at: <https://www.justice.gov/opa/pr/chinese-national-pleads-guilty-conspiring-hack-us-defense-contractors-systems-steal-sensitive>, last visited: 5 May 2020.

⁶⁷ Office of Public Affairs, ‘Addition of Fujian Jinhua Integrated Circuit Company, Ltd (Jinhua) to the Entity List’, *U.S. Department of Commerce*, 29 October 2018, available at: <https://www.commerce.gov/news/press-releases/2018/10/addition-fujian-jinhua-integrated-circuit-company-ltd-jinhua-entity-list>, last visited: 5 May 2020.

⁶⁸ Horowitz, J. and A. Jourdan, ‘China chipmaker Fujian pleads not guilty to US theft charges’, *Reuters*, 10 January 2019, available at: <https://www.reuters.com/article/us-fujian-jinhua-china-court/china-chipmaker-fujian-jinhua-pleads-not-guilty-to-us-theft-charges-idUSKCN1P4080>, last visited: 5 May 2020.

⁶⁹ Office of Public Affairs, ‘PRC-State-Owned Company, Taiwan Company, and Three Individuals Charged With Economic Espionage’, *The United States Department of Justice*, 1 November 2018, available at: <https://www.justice.gov/opa/pr/prc-state-owned-company-taiwan-company-and-three-individuals-charged-economic-espionage>, last visited: 5 May 2020.

⁷⁰ ‘Good First Step to Combat Chinese Theft of American IP, but more to be done, says IP Commission in Response to Section 301 Investigation’, *The IP Commission*, 22 March 2018, available at: http://www.ipcommission.org/press/IPC_press_release_032218.pdf, last visited: 5 May 2020.

⁷¹ ‘The Report of the Commission on the Theft of American Intellectual Property’, *The IP Commission*, May 2013, available at: http://www.ipcommission.org/report/IP_Commission_Report_052213.pdf, last visited: 5 May 2020.

⁷² ‘The Theft of American Intellectual Property: Reassessments of the Challenge and United States Policy’, *The IP Commission*, February 2017, available at: http://ipcommission.org/report/IP_Commission_Report_Update_2017.pdf, last visited: 5 May 2020.

it de facto required that foreign companies form joint ventures (JV) in order to functionally operate in China and that these companies were forced to transfer proprietary information to that JV.⁷³ The situation was, according to China, altered by the passage of the Foreign Investment Law (2019), which entered into force in 2020. However, while the law claimed to afford Foreign Invested Enterprises (FIE) the same standing as Chinese firms, the law has faced criticism for its omissions.⁷⁴ In particular, the law's relatively vague provisions are – unlike their Western equivalents – silent on the rights of Western firms rights to acquire Chinese businesses.⁷⁵

This disparity exists despite legal language in the Bilateral Investment Treaties in force between China and Australia, Canada, New Zealand, and the UK that ostensibly require comparable treatment for firms from these nations. The Canadian agreement offers a good guide as to the requirements:

Each Contracting Party shall accord to investors of the other Contracting Party treatment no less favourable than that it accords, in like circumstances, to its own investors with respect to the expansion, management, conduct, operation and sale or other disposition of investments in its territory.⁷⁶

Differences between the environmental standards required of Chinese and foreign manufacturers have also been a bone of contention within the five powers' capitals. Over recent decades, the five powers have introduced successively more rigorous environmental protections.⁷⁷ Such protections have, on occasions, imposed additional costs on foreign manufacturers. In instances where similar measures have not been replicated in China, manufacturers have acquired a competitive advantage by virtue of not incurring similar costs. This trend has caused particular consternation as – in certain circumstances – this competitive shift has caused equivalent global environmental damage as Chinese manufacturers have adopted similar or more polluting techniques to make up the production lost in developed economies.

Nowhere have differentiating requirements been more impactful than in energy-intensive industries. These include metals manufacturing, such as magnesium, tungsten, tantalum, manganese, and molybdenum, within all of which China has begun to develop a dominance.

⁷³ 'Congressional Record Volume 164, Number 85', *Government Publishing Office (US)*, 23 May 2018, available at: <https://www.congress.gov/crec/2018/05/23/modified/CREC-2018-05-23-pt1-PgS2846-3.htm>, last visited: 5 May 2020.

⁷⁴ Broadman, H., 'China's new foreign Investment law is a missed opportunity', *Financial Times*, 23 December 2019, available at: <https://www.ft.com/content/2fb69129-2938-4ca0-a523-426c8bc259ad>, last visited: 5 May 2020.

⁷⁵ Ibid.

⁷⁶ 'Agreement Between the Government of Canada and the Government of the People's Republic of China for the Promotion and Reciprocal Protection of Investments', *United Nations Conference on Trade and Development*, 2016, available at: <https://investmentpolicy.unctad.org/international-investment-agreements/treaty-files/3476/download>, last visited: 5 May 2020.

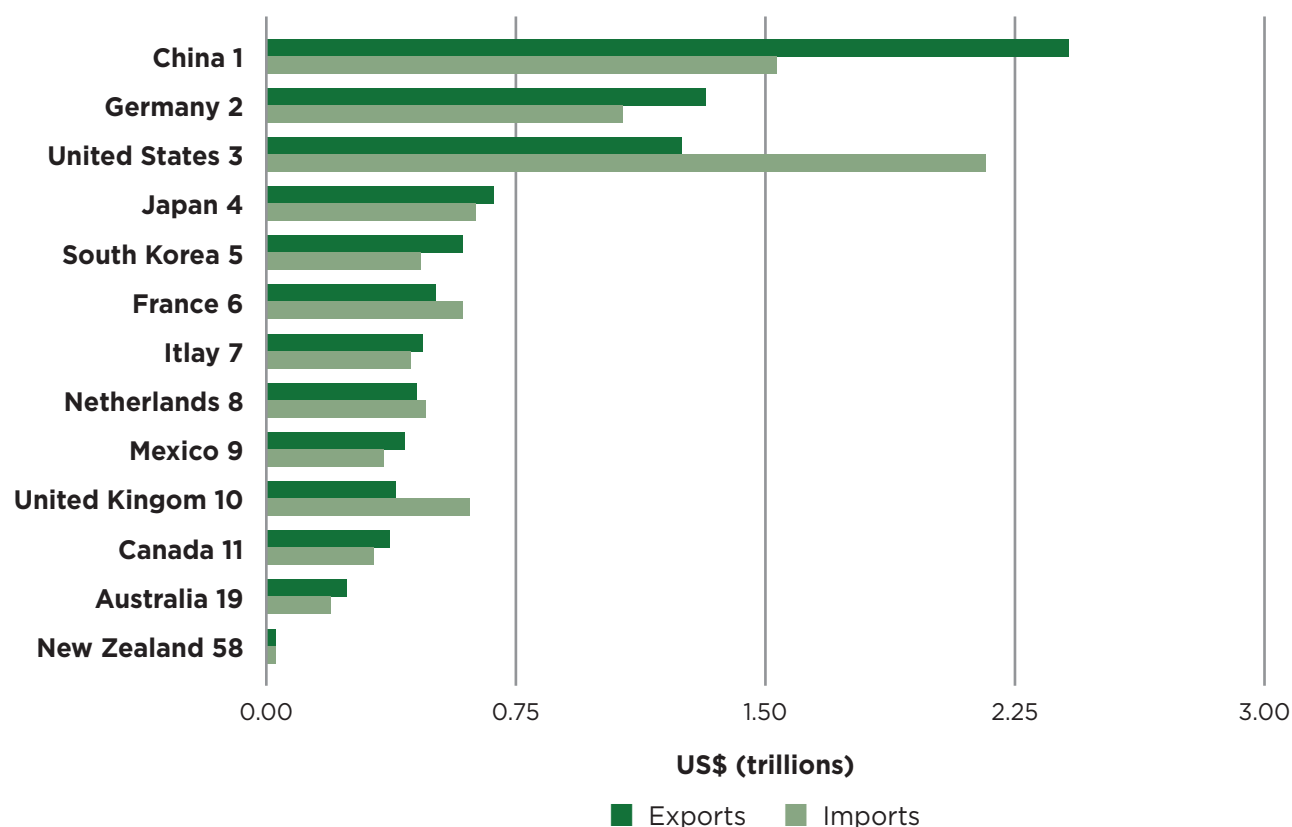
⁷⁷ Rogers, J., 'Core Assumptions and British Strategic Policy', *Henry Jackson Society*, 21 January 2020, available at: <https://henryjacksonsociety.org/publications/core-assumptions/>, last visited: 5 May 2020, p.35.

4. How dependent are the five powers?

Today, the five powers find themselves in a relationship with China that increasingly resembles Britain's economic relationship with Germany during the early twentieth century. Despite the five powers' efforts to deter undue foreign interference in and acquisition of their strategic industries as well as prevent dependency on foreign trade, the five countries have continued to become dependent on foreign suppliers for manufactured goods. This is particularly the case with China, which seeks to supplant both them and the rules-based international order they helped create and uphold with its own authoritarian political and economic model.

As Graph 1 shows, with the exception of New Zealand, the five powers are among the world's largest international traders of goods.⁷⁸ Taken together, they would constitute a trading unit far larger than other global trading blocs, such as the European Union.

Graph 1: Imports and exports (2017), the five powers and other large traders⁷⁹



Three of the five powers are net exporters, while two (the US and the UK) are net importers (and by some margin). Yet – given the nature of the globalised economy and the economic complexity of their advanced economies – all of these countries are highly dependent on imports.

This gives rise to the general question of how dependent the five powers are on certain classes of imports. In the context of China, it raises the issues both of how dependent they are on the authoritarian nation and of what aspects of that dependency could cause security threats.

⁷⁸ 'Where does the world export to? (2017)', *Observatory of Economic Complexity*, available at: https://oec.world/en/visualize/tree_map/hs92/export/wld/show/all/2017/, last visited: 5 May 2020; 'Where does the world import from? (2017)', *Observatory of Economic Complexity*, 2020, available at: https://oec.world/en/visualize/tree_map/hs92/import/wld/show/all/2017/, last visited: 5 May 2020.

⁷⁹ Data gathered from each country webpage of the Observatory of Economic Complexity. For China, see: <https://oec.world/en/profile/country/chn/>, last visited: 5 May 2020.

4.1 Global trade statistics

Statistics of the global trade in goods are collected – in the first instance – by nation states, chiefly through their respective customs apparatus. This data is then compiled and published by international bodies, including the World Trade Organization and the Department of Economic and Social Affairs of the United Nations.⁸⁰

A series of categorisation systems exist for data about the international trade of goods. This includes the Standard Industrial Classification system used in various forms by the UK, the US, Canada, Australia, and New Zealand. However, the most detailed categorisation is the Harmonised System (HS). Ostensibly a six-digit system, the HS works by initially dividing imported goods into 99 industries, before then splitting each industry into 99 sectors, and further splitting each sector into 99 categories. In all, between the five powers there are 5,914 reported variants of imports, giving a sophisticated representation of the complexity of international trade.

The globally published source for HS trade data is Comtrade, a project of the Trade Statistics Branch (TSB) of the United Nations Statistics Division. In all, Comtrade has published more than 1 billion trade records stretching back to 1962.⁸¹ Importantly, the HS records only trade in goods; it does not consider global trade in services.

This report uses the Harmonised System to calculate the relative exchanges of trade between states.

4.2 Assessing “strategic dependency” on China

In assessing for which goods one or more members of the five powers are dependent on China, this paper proposes a definition of “strategic dependence”. Strategic dependency is a level of reliance on imports from another country that gives the exporting country the ability to significantly impact the overall domestic availability of that imported good.

The report applies three tests to assess whether one of the five powers is strategically dependent on China.⁸² All three tests must be met in order for one to be considered strategically dependent. These tests are:

- ✓ More than 50% of the country’s imports in an industry, a sector, or a category of goods come from China.
- ✓ A country is a net importer of that industry, sector, or category of goods.
- ✓ China has a greater than 30% market share of global trade in that industry, sector or category of goods.

The three tests mean that in the relevant breakdown of goods, the country is currently dependent on imports, that the majority of imports come from China, and that the country could be constrained – for economic, geopolitical or other reasons – from rapidly sourcing alternative supplies.

To calculate the results, this report took the most recent year’s data available from Comtrade and assembled it in a database.⁸³ The database was ordered so that each category of goods

⁸⁰ ‘2018 International Trade Statistics Yearbook’, *United Nations Department of Economic and Social Affairs: Statistics Division*, 2018, available at: <https://comtrade.un.org/pb/downloads/2018/Voll2018.pdf>, last visited: 5 May 2020.

⁸¹ UN Comtrade, ‘Read Me First (Disclaimer): Every User of UN Comtrade should know the coverage and limitations of the data’, *United Nations Commodity Trade Statistics Database*, available at: <https://comtrade.un.org/db/help/uReadMeFirst.aspx>, last visited: 5 May 2020.

⁸² This report excludes trade data from Hong Kong and Macau which are reported separately from China. In certain categories of goods, dependency on China may in fact be higher than stated.

⁸³ In the case of the US, the UK, New Zealand and Canada, the most recent data available was from 2019. In the case of global figures and information from Australia, the most recent data available was from 2018.

was arranged as a row; against which each country's percentage of imports from China, each country's level of import dependency, and China's share of the global market share were recorded in the relevant column attached to it. A value of "true" or "false" was recorded against each country according to whether or not the three tests were met.

In order to analyse for which of the goods that one or more of the five powers are dependent on China have applications in industries of a particularly sensitive nature, the report relies on section two's definitions of critical industries. Section two outlined 20 industries split between those where one or more of the five powers consider it to be critical – the "Critical 11" – and those that are considered to be "core areas" of the Fourth Industrial Revolution – the "Future 9".

The exercise of assessing which goods have applications in sensitive fields inevitably involves a degree of subjective judgment. Interconnected, interdependent, and complex trade lines make it possible to connect almost any variety of good to any sector. For example, ballpoint pens are used in nearly every sphere of human activity and are a good for which Australia, Canada, and New Zealand are strategically dependent on China. Nevertheless, a sudden shortage of ballpoint pens is unlikely to bring three countries' health services to a grinding halt.

To assess which goods are relevant and necessary, this report applied three further tests for determining whether goods have applications in sensitive fields. In order to be considered, an industry, sector, or category of good must meet two of the following three criteria:

- ✓ The good has a direct application in the field.
- ✓ The good must be critical to the facilitation of the sector's operations.
- ✓ Should supply of the good be withdrawn, the country would be unable to maintain or quickly expand the scale of this industry.

An additional screening criterion was adopted in the case of foodstuffs where a research decision was made to exclude foodstuffs at the six-digit level from consideration. As the security of food and agriculture is chiefly about overall supply, a reduction in capacity in one category would not necessarily result in a shortage. Preservatives, additives, and preparatory equipment were retained at the six-digit data level.

4.3 Overall dependency (including non-sensitive supplies)

The full range of goods upon which the five powers are strategically dependent on China is recorded in Table 2. The overall number of breakdowns of goods that members of the Five Eyes imported from China is 5,910.

Table 2: The five powers' overall strategic dependency on China (including non-sensitive supplies)

Overall strategic dependency					
	Australia	Canada	New Zealand	United Kingdom	United States
Industries (HS 2)	14	5	10	4	6
Sectors (HS 4)	141	87	125	56	102
Categories (HS 6)	595	367	513	229	414

In simple strategic dependency terms, Australia is most exposed to China. It is followed – in order – by New Zealand, the US, Canada, and the UK. Across the five powers as a whole, countries are dependent on 831 categories of goods, 184 of sectors of goods, and 17 industry-wide forms of goods.

4.4 Dependency in critical and potentially critical industries

Overall import dependency can have strategic implications. But such implications can be modest. By way of example, China has an 83% share of the global market of Christmas tree lighting, with four of the five powers being dependent on it. Despite this imbalance, it would be hard to foresee a scenario in which this shortage of supply could threaten the security or prosperity of a nation.

China's exports are not, though, limited to the whimsical. Great swathes of its exports are relied upon by Western states to serve industries and services of the most essential natures. These exports range from primary goods to complex computing equipment. It is these goods that service the "Critical 11" sectors of Western economies, such as health, energy, essential industry and information technology, that give policymakers particular pause for concern.

Such concerns are not without good cause. As Table 3 shows, strategic dependency on China in imports that do serve critical industries is widespread. Across the five powers as a whole, countries are dependent on 260 categories of goods, 54 of sectors of goods, and five industry-wide forms of goods.

The "Critical 11" industries are:

1. Communications
2. Energy
3. Healthcare and public health
4. Transportation systems
5. Water (including wastewater and storm water systems)
6. Banking and financial services
7. Critical manufacturing
8. Emergency services
9. Food and agriculture
10. Government facilities
11. Information technology

Table 3: The five powers' dependency on China for "Critical 11" sectors

"Critical 11" strategic dependency					
	Australia	Canada	New Zealand	United Kingdom	United States
Industries (HS 2)	3	1	4	0	2
Sectors (HS 4)	37	22	30	14	29
Categories (HS 6)	167	83	144	57	114

Taken as a percentage of the overall dependence, the number of goods that service a critical industry are concerning. In Australia, 27.6% of goods for which it is strategically dependent on China have such a use; in Canada it is 23.1%; in New Zealand it is 27.5%; in the UK it is 24.6%; and in the US it is 27.8%.

As the world's economy develops over the next two decades, the profile of goods required to service critical industries is likely to change. The goods that service the needs of these critical industries of the future will probably assume critical security importance. As section three argues, an early lead in the development of these goods will also allow dominant states to set global standards for these goods, and to do them in their own industries.

These “Future 9” goods are, then, in some senses, the most strategically consequential of any of the goods in the exchange of modern trade. States that control the technologies of the future now will lead them as they assume their prospective prominence. The number of goods involved in these sectors is comparatively limited, though continuously evolving. However, the future utility of each of these goods is such that they are of comparative significance compared to others and warrant particular attention. The “Future 9” comprise:

1. Artificial intelligence and machine learning
2. Autonomous robotics
3. Computing hardware
4. Cryptographic technology
5. Materials and manufacturing science
6. Nanotechnologies
7. Networking and data communication
8. Quantum technology
9. Synthetic biology

Table 4: The five powers' dependency on China for “Future 9” sectors

“Future 9” strategic dependency					
	Australia	Canada	New Zealand	United Kingdom	United States
Industries (HS 2)	1	0	1	0	0
Sectors (HS 4)	13	8	11	2	6
Categories (HS 6)	35	25	35	12	25

The five powers are collectively dependent on 57 categories of goods, 15 of sectors of goods, and one industry-wide form of good. Table 4 shows how this dependency is broken down by country.

4.5 Country dependencies

4.5.1 Australia

Of the five powers, Australia is strategically dependent on China for the largest number of imports. Within goods that service the “Critical 11”, it is strategically dependent on 41 categories and 11 sectors which no other member of the five powers are.

Some of these are products that Australia presumably struggles to produce economically by virtue of its climate, such as onions, garlic and similar vegetables (63%) and dried vegetables (52%). Others reflect Australia's need to source components for its mining and metal production industries, including bucket-type elevators and conveyors (63%) and ingot moulds for metallurgy (90%). Similarly, 73% of soldering irons and 70% of resistance welding machines are imported from China. Australia is also dependent on China for imports of ten categories of simply processed aluminium and steel, and one sector of aluminium. Other unique forms of dependency include graphite, a critical engineering component, and a number of chemicals, fertilisers and vitamins.

In terms of overall greatest dependence, there are three categories of goods for which, according to 2018's Comtrade data, Australia was exclusively dependent on Chinese imports. They are magnesium of greater than 99.8% purity; 1-Cyanoguanidine, a chemical used in fertilisers; and tributyltin compounds, a biocide. Australia was also 99.9% dependent on China for its imports of manganese.

In addition, Australia is dependent on China for its supply of medical equipment and pharmaceutical goods. Goods with a medical application include azelaic acid (61%), penicillin and its precursors (69%), certain categories of steel sanitary ware (72%), spectacles and protective goggles (73%), salicylic acid (84%), first aid kits (85%), and anthraquinone (89%).

4.5.2 New Zealand

Although New Zealand is the second-most dependent of the five powers on China for imports, its unique profile of dependency means it is of arguably greater concern. There are 34 categories of goods, five sectors, and one industry on which New Zealand alone within the five powers is strategically dependent on Chinese imports.

Of the five powers, New Zealand is alone within the Five Eyes in that it is strategically dependent on China for printed circuits (67%), the crucial building block of much modern technology. It is also dependent on China for its supply of peroxosulphates (64%), the chemical used to etch copper into circuit boards and which China has been accused of dumping.⁸⁴ It is also strategically dependent on China for a series of goods with critical industry applications including benzene (97%), molybdenum (76%), categories of refractory bricks (69%), lathes (65%), solid caustic soda (57%), portal and pedestal jib cranes (55%), as well as six categories of simply processed steel and aluminium and one sector of such goods. Uniquely, New Zealand also appears to have a dependency on China for its transport system, including railway rolling stock at an industry level (65%), rubber inner tubes (56%), and transport vessels (71%).

New Zealand stands alone within the five powers in being dependent on China for its supply of streptomycin (95%), an essential medicine classified as "critically important to human medicine" by the WHO.⁸⁵ New Zealand is also overwhelmingly dependent on China for other forms of antibiotics including penicillins (96%) and tetracyclines (95%). Perhaps of most concern is New Zealand's total dependency on China for acetylsalicylic acid, more commonly known as aspirin. In 2019, 100% of its imported supply originated from China.

New Zealand is similarly dependent on China for its imports of electronics and communication equipment. At a sectoral level, 63% of New Zealand's telecommunication imports originate in

⁸⁴ 'Guidance: Peroxosulphates or persulphates from China (anti-dumping duty 2393)', *UK Government*, 17 April 2020, available at: <https://www.gov.uk/government/publications/peroxosulphates-or-persulphates-from-china-anti-dumping-duty-2393/peroxosulphates-or-persulphates-from-china-anti-dumping-duty-2393>, last visited: 5 May 2020.

⁸⁵ 'Critically Important Antimicrobials for Human Medicine', *World Health Organization*, 2018, available at: <https://apps.who.int/iris/bitstream/handle/10665/312266/9789241515528-eng.pdf?ua=1>, last visited: 5 May 2020.

China. More alarmingly, at a category level, New Zealand is the only member of the Five Eyes to be dependent on China for cellular base stations (77%). New Zealand is also dependent on China for imports of mobile phones (67%) and laptops (93%).

4.5.3 United States

In the list of the five powers where the total number of imported goods for which it is strategically dependent on China is concerned, the US ranks third. The US is dependent on 16 categories, five sectors, and one industry level group of goods, with strategic implications that do not apply to the other four powers. Of these items, a number have industrial applications, including tungsten (55%), benzaldehyde (65%), manganese dioxide batteries (56%), winches (52%), and compounds of certain rare earth metals (68%).

It is notable that the US is also unique among the five powers to have a strategic dependency of vitamin supplements at a sectoral level (60%). At the category level, this strategic dependency for supplements includes vitamin B2 (62%), vitamin C (74%), vitamin D (76%), vitamin B1 (85%), vitamin B6 (91%), vitamin B12 (95%), and coenzyme Q10 (99%).⁸⁶ In addition, the US is dependent for three categories of antibiotics, in the forms of penicillin (52%), tetracyclines (90%), and chloramphenicol (93%).

The US is also reliant on Chinese imports in important industrial processes, including goods such as steel-toed boots (64%), welded-link chain (53%), vehicle jacks (83%), gantry chains (65%), shipping containers (66%), safety glass (73%), and metal castors (56%). Similarly, in addition to tungsten, the US is dependent on China for a host of metals, including manganese (66%), and scandium/yttrium (68%).⁸⁷

US dependency is not limited to mechanical or chemical goods, however. In fact, the US is dependent on China for a series of high-tech products. These include laptops (93%), mobile phones (73%), projectors (52%), video games consoles (88%), and microphones (58%). The US, alongside New Zealand, is also dependent on China for lithium-ion batteries (51%), a critical component in electrical manufacturing.

One element of dependency that the US shares with Australia – but not the other three powers (Britain, Canada and New Zealand) – is in goods with maritime applications, including anchors (65%), fishing equipment (66%), and life jackets (82%).

4.5.4 Canada

Canada is dependent for five categories of goods not relied upon by any other of the five powers. Among those goods are two food additives: saccharin (52%) and aldehyde ethers and alcohols (51%).

In the field of medicine, Canada is reliant upon both pharmaceutical products and – like the other four powers – vitamins and food supplements. Within pharmaceutical goods and their precursors, goods for which Canada is strategically dependent upon China encompass, among others, anthraquinone (96%), naphthols (81%), azelaic acid (68%), first aid boxes (67%), hydantoin (64%), some steroidal hormones (61%), resorcinol (60%), and acetylsalicylic acid (59%). Supplements include lysine (51%), choline (55%), vitamin C (58%), vitamin B1 (65%), vitamin D (68%), vitamin B6 (81%), vitamin B12 (81%), and coenzyme Q10 (98%).

⁸⁶ Coenzyme Q10 is of disputed nutritional value as a supplement but is nonetheless taken by millions of people every year as such.

⁸⁷ Scandium and yttrium are grouped together under the HS code.

Canada is also strategically dependent on China for a series of metals, including manganese (88%), scandium and yttrium (85%), magnesium (77%), certain alkali metals (53%), and tungsten (53%). This dependency is compounded by a strategic reliance on China for a series of industrial products, including steel and iron grinding balls (74%), shipping containers (71%), piezoelectric quartz (61%), iron and steel nails (57%), carbon electrodes (55%), sodium metasilicates (55%), magnets (52%), and hydraulic jacks (52%).

In addition, Canada is dependent on China for critical consumer electronics, including laptops (87%) and mobile phones (78%), as well as video recorders (54%), sound recorders (52%), microphones (66%), and speakers (63%).

4.5.5 United Kingdom

The UK is dependent on China for the smallest number of varieties of goods both in absolute terms and within sectors that service strategic industries. However, the three categories and one sector of goods it alone is dependent for, along with the wider goods, paint a troubling picture of high levels of dependency within critical sectors. Among the goods in which the UK is unique among the five powers to be dependent are fluorosilicates, fluoroaluminates and other complex fluorine salts (60%). These chemicals are used as disinfectants, in metal castings, and in electroplating.

Within the medical sector, the UK is dependent on China for a series of goods. Among these are phenylacetic acid (96%) a chemical used in a series of drugs, for which the UK is unique among the five powers to be strategically dependent. Britain is also dependent upon China for imports of chloramphenicol (88%), an antibiotic; acetylsalicylic acid (61%), aspirin; azelaic acid (58%), used in skin medicines; aniline and similar amine-function-compounds (95%), used in paracetamol; phosphonates (57%), used in anti-viral medicines; hydantoin (55%), and anthraquinone (53%). It is also dependent on China for its supply of steel sanitary ware (51%) and copper sanitary ware (70%).

In addition, the UK is dependent on China for a series of goods with important industrial applications, including stud-link chain (85%), steel-capped boots (63%), safety glass (61%), barium carbonate (57%), artificial corundum (56%), steel grinding balls (55%), magnets of all types (52%), and magnesium (50%).

Likewise, the UK is highly dependent on China for television receivers and decoders (83%), laptops (68%), and mobile phones (61%).

4.6 Case studies

4.6.1 Pharmaceuticals

China is the world's largest producer of active pharmaceutical ingredients (APIs), and each of the five powers is dependent on drugs that are either imported from China or include APIs imported from China. This dependency varies between countries, but in at least one case it is as high as 100%.⁸⁸ Unlike the five powers' pharmaceutical industries, which produce high-value, high-cost goods, China's pharmaceutical industry produces cheap generic drugs and APIs.

According to a report published by the US-China Economic and Security Review Commission in November 2019, China emerged as the world's largest producer of APIs because of "Government subsidies, a robust chemical industry, IP theft, lax environmental protections, and

⁸⁸ In 2019, 100% of New Zealand's imported supply of o-acetylsalicylic acid, commonly known as aspirin, originated in China.

regulations favouring domestic companies”.⁸⁹ While China had long produced pharmaceuticals for domestic consumption, in 2008 the CCP designated it as a “high-value-added industry” and implemented a number of economic incentives – including subsidies and export tax rebates – to encourage exports. Pharmaceutical production was itself aided by China’s chemical industry, which accounts for nearly 40% of global revenue within the sector and has been the world’s largest (ranked by revenue) since 2011.⁹⁰

The growth of China’s chemical industry combined with its resulting dominance in the production of APIs means that the world is increasingly dependent on China for drugs. According to Rosemary Gibson, co-author of the 2018 book *China Rx: Exposing the Risks of America’s Dependence on China for Medicine*, Chinese drug companies have deliberately dumped low-price products into the global market and this has, in turn, pushed alternative producers – including those within the five powers – out of business.⁹¹

The centralisation of the global supply chain of pharmaceuticals in a single country makes it vulnerable to interruption, whether by mistake or design. The implications of this situation are stark: the supply of pharmaceuticals to the five powers is at risk if China cuts off supplies or hikes the cost(s) of medicines. This threat increases greatly during periods of geopolitical stand-off, as China’s so-called ‘mask diplomacy’ during the current COVID-19 pandemic reveals. The supply is also at risk if China suffers disruption to its domestic production processes.⁹² The five powers’ dependency on China for pharmaceuticals can also be weaponised: medicines can be made with lethal contaminants or medicines can be replaced with placebos, and these products can be distributed to specific targets. Detection is time consuming at best, and virtually impossible at worst.

4.6.2 Energy

China controls 36.97% of the global market for lithium-ion batteries, and two of the five powers are dependent on China for their supply: New Zealand (62.48%) and the US (50.84%). Every fully electric car in the world is powered by a lithium-ion battery, and most smartphones are too. Such are the benefits of lithium-ion technology that in less than 30 years it has gone from zero market share to having nearly the same market share as the lead-acid battery.

Developed in 1859, the lead-acid battery was the world’s first rechargeable battery, and it is still commonly used today. While the design of the lead-acid battery changed over time, the battery market did not undergo a fundamental shift until the late 1980s, when the lithium-ion battery was developed following breakthroughs at the universities of Oxford and Stanford. Sony commercialised the first lithium-ion battery in 1991.

Over the last three decades, the inherent advantages of lithium-ion batteries – they are lightweight and small and offer huge energy storage – mean they have become the battery of

⁸⁹ ‘Section 3: Growing U.S. Reliance on China’s Biotech and Pharmaceutical Products’, *United States-China Economic and Security Review Commission* (2019), available at: <https://www.uscc.gov/sites/default/files/2019-11/Chapter%203%20Section%203%20-%20Growing%20U.S.%20Reliance%20on%20China%E2%80%99s%20Biotech%20and%20Pharmaceutical%20Products.pdf>, last visited: 5 May 2020.

⁹⁰ Hong, S., Y. Jie, X. Li and N. Liu, ‘China’s chemical industry: New strategies for a new era’, *McKinsey & Company*, March 2019, available at: <https://www.mckinsey.com/industries/chemicals/our-insights/chinas-chemical-industry-new-strategies-for-a-new-era>, last visited: 5 May 2020.

⁹¹ ‘Testimony of Rosemary Gibson, Senior Advisor, The Hastings Center and Author, “China Rx: Exposing the Risks of America’s Dependence on China for Medicine” Before the U.S.-China Economic and Security Review Commission “Exploring the Growing U.S. Reliance on China’s Biotech and Pharmaceutical Products”’, *United States-China Economic and Security Review Commission*, 2019, available at: <https://www.uscc.gov/sites/default/files/RosemaryGibsonTestimonyUSCCJuly152019.pdf>, last visited: 5 May 2020.

⁹² In 2017, an explosion at a Chinese factory producing APIs for the antibiotic piperacillin/tazo-bactam, a drug given to patients with severe infections, led to a global shortage. See Davis, N., ‘Antibiotic shortage puts patients at risk, doctors fear’, *The Guardian*, 1 July 2017, available at: <https://www.theguardian.com/society/2017/jul/01/antibiotic-shortage-puts-patients-at-risk>, last visited: 5 May 2020.

choice in many consumer electronics. Recently, sales of lithium-ion batteries have also been driven by electric cars. While most cars on the roads today use a lead-acid battery and an internal combustion engine, electric cars are powered by lithium-ion batteries. Sales of these cars have increased more than tenfold in the past five years.⁹³

China is attempting to dominate the global lithium-ion industry. Though Japan had a head start, China was able to catch up because of its ability to manufacture the batteries on a larger scale and sell them more cheaply. China also has significant lithium reserves – in 2018, its production was 7,500 tons, third among all countries globally.⁹⁴ In addition, China has been investing in mining operations in Australia and South America, the principal global sources of the metal. Between 2017 and 2019, China invested US\$4.2 billion in lithium deals in South America alone, according to *Reuters*.⁹⁵

China has also tightened its grip on the supply of cobalt, another important lithium-ion battery component. In 2017, almost 70% of the world's cobalt was produced by the Congo, and eight of the 14 largest cobalt-producing mines there are owned by Chinese companies.⁹⁶

Today, two of the world's largest lithium producers are Chinese companies – Jiangxi Ganfeng Lithium and Tianqi Lithium.⁹⁷ This dominance has triggered growing concerns in foreign capitals that China could squeeze them out of the next generation of industry.⁹⁸

4.6.3 Information technology

For the past two decades, China has been the world's electronics manufacturing hub. Its dominance of global laptop computer exports is more recent, but it was once near absolute; at its peak, the city of Chongqing, in southwestern China, is said to have produced one in every three laptops in the world.⁹⁹ In 2017 China accounted for 68.75% of global exports, and all the five powers are dependent on China for laptops, varying from 94.29% in Australia to 67.63% in the UK.

There are two main reasons for this situation. The first is the expansion of computer manufacturers from China to global markets, such as Lenovo. Supported by various state initiatives at home – such as tax breaks, access to foreign exchange, and other forms of financial assistance – these manufacturers have significantly advanced their share of the global market.¹⁰⁰ In Q4 2009, Lenovo accounted for 8% of the global computer market (by units sold); by Q4 2019, this

⁹³ Rapier, R., 'Why China is Dominating Lithium-Ion Battery Production', *Forbes*, 4 August 2019, available at: <https://www.forbes.com/sites/rrapier/2019/08/04/why-china-is-dominating-lithium-ion-battery-production/#9ecb4cd37867>, last visited: 5 May 2020.

⁹⁴ 'Mineral Commodity Summaries 2020', *United States Geological Survey* (2020), available at: <https://pubs.usgs.gov/periodicals/mcs2020/mcs2020.pdf>, last visited: 5 May 2020.

⁹⁵ Taj, M. and M. Nienaber, 'In the new lithium "Great Game," Germany edges out China in Bolivia', *Reuters*, 28 January 2019, available at: <https://uk.reuters.com/article/us-bolivia-lithium-germany/in-the-new-lithium-great-game-germany-edges-out-china-in-bolivia-idUKKCN1PM1LS>, last visited: 5 May 2020.

⁹⁶ Farchy, J. and H. Warren, 'China Has a Secret Weapon in the Race to Dominate Electric Cars', *Bloomberg*, 2 December 2018, available at: <https://www.bloomberg.com/graphics/2018-china-cobalt/>, last visited: 5 May 2020.

⁹⁷ Barrera, P., 'Top Lithium-mining Companies', *Lithium Investing News*, 17 February 2020, available at: <https://investingnews.com/daily/resource-investing/battery-metals-investing/lithium-investing/top-lithium-producers/>, last visited: 5 May 2020.

⁹⁸ In May 2019, the European Investment Bank pledged €350m to back Swedish battery start-up Northvolt, which aims to build a battery factory in Sweden and source raw minerals such as lithium from Europe. See Smit, T., 'Sweden: European backing for Northvolt's battery gigafactory', *European Investment Bank*, 16 May 2019, available at: <https://www.eib.org/en/press/all/2019-127-european-backing-for-northvolt-s-battery-gigafactory-in-sweden>, last visited: 5 May 2020.

⁹⁹ Ting-Fang, C., L. Li, C. Liu and S. Tabeta, 'HP, Dell and Microsoft look to join electronics exodus from China', *Nikkei Asian Review*, 3 July 2019, available at: <https://asia.nikkei.com/Economy/Trade-war/HP-Dell-and-Microsoft-look-to-join-electronics-exodus-from-China>, last visited: 5 May 2020.

¹⁰⁰ Breznitz, D. and M. Murphree, *Run of the Red Queen: Government, Innovation, Globalization, and Economic Growth in China* (New Haven, Connecticut: Yale University Press, 2011), p.113.

figure had increased to 24.8%, making it the market leader.¹⁰¹ The second reason is the growth of domestic demand for computers. China surpassed the US in 2011 to become the world's leading market for PCs, and this in turn led to a drive by domestic producers.¹⁰² China also has the largest number of internet users in the world: in 2017, the number stood at 765 million.¹⁰³

China also benefited from a shift of electronics manufacturing in the early 2000s from South Korea, which itself had become the electronics manufacturing hub after taking business from Japan. Some of this manufacturing is now shifting from China to southeast Asia, and this is particularly the case with mobile phones. Samsung, for example, built a new factory in Vietnam in 2014 and closed its last factory in China in 2019.¹⁰⁴ Google has redirected some of its smartphone production to Vietnam,¹⁰⁵ and so too has LG. Sony has shifted production to Thailand. Yet many of these companies still rely on China for components, such as glass screens, sensors, plugs, and cables.¹⁰⁶ Most such components are also used for computers, and laptops in particular. There are, for example, five LCD factories in Wuhan, the centre of the COVID-19 outbreak.¹⁰⁷

The powers' dependence on China for the production of laptop computers leaves them vulnerable to disruption. As the COVID-19 outbreak has shown, with factories closed or operating at below full capacity in China, the demand for laptops is currently outstripping the supply, and consumers are facing lengthy waits for products.¹⁰⁸ This dependency can also be weaponised: China has the ability to compromise hardware supply chains, such as by hiding microchips on motherboards.¹⁰⁹

4.6.4 Food and agriculture

In addition to being one of the world's largest producers of critical generic drugs, China produces the bulk of the world's health-related products, including food and vitamin supplements.

This production has been driven by both domestic and international factors. Domestically, although traditional herbal remedies and supplements have been taken for centuries, demand for Western-style vitamins and supplements has grown in recent years, with a number of domestic and multinational vitamin and supplement makers vying for a share of the market.¹¹⁰ Internationally, aging populations, together with increased demand for preventative healthcare

¹⁰¹ 'Lenovo's market share of personal computer (PC) unit shipments worldwide from 2009 to 2020, by quarter', *Statista*, available at: <https://www.statista.com/statistics/255306/global-pc-market-share-held-by-lenovo-since-the-1st-quarter-2009/>, last visited: 5 May 2020.

¹⁰² Fletcher, O., 'China Passes U.S. as World's Biggest PC Market', *The Wall Street Journal*, 24 August 2011, available at: <https://www.wsj.com/articles/SB10001424053111903461304576525852486131230>, last visited: 5 May 2020.

¹⁰³ Our World in Data, 'Number of internet users by country, 2007 to 2016', *Our World in Data*, 2017, available at: <https://ourworldindata.org/grapher/number-of-internet-users-by-country?tab=chart&time=2007..2016&country=BRA+CHN+DEU+IND+IDN+JPN+MEX+RUS+GBR+USA>, last visited: 5 May 2020.

¹⁰⁴ 'Why Samsung of South Korea is the biggest firm in Vietnam', *The Economist*, 12 April 2018, available at: <https://www.economist.com/asia/2018/04/12/why-samsung-of-south-korea-is-the-biggest-firm-in-vietnam>, last visited: 5 May 2020.

¹⁰⁵ Jhaveri, A., 'Google Pixel 4A manufacturing to move to Vietnam', *Tech Radar*, 4 March 2020, available at: <https://www.techradar.com/news/google-pixel-4a-manufacturing-to-move-to-vietnam>, last visited: 5 May 2020.

¹⁰⁶ Reed, J. and S. Jung-a, 'Samsung flies phone parts to Vietnam after coronavirus hits supply chain', *Financial Times*, 17 February 2020, available at: <https://www.ft.com/content/Odc1c598-4f06-11ea-95a0-43d18ec715f5>, last visited: 5 May 2020.

¹⁰⁷ Khalid, A., 'How coronavirus is upending Big Tech', *Quartz*, 11 February 2020, available at: <https://qz.com/1800540/how-coronavirus-is-upending-the-tech-industrys-supply-chain/>, last visited: 5 May 2020.

¹⁰⁸ Hille, K., A. Gray and P. McGee, 'Coronavirus delays PC and smartphone shipments for weeks', *Financial Times*, 3 March 2020, available at: <https://www.ft.com/content/72742872-5c31-11ea-b0ab-339c2307bcd4>, last visited: 5 May 2020.

¹⁰⁹ Newman, L. H., 'There's No Good Fix If the Supply Chain Gets Hacked', *Wired*, 10 April 2018, available at: <https://www.wired.com/story/supply-chain-hacks-cybersecurity-worst-case-scenario/>, last visited: 5 May 2020.

¹¹⁰ Plowright, M., 'China's vitamin market harder to crack for western companies', *Financial Times*, 14 May 2018, available at: <https://www.ft.com/content/f1c82b58-fa2c-11e4-b432-00144feab7de>, last visited: 23 April 2020.

and the rise of the self-directed consumer, led to an expansion in the vitamins market in the West from the 1970s onwards.

Today, China produces the majority of vitamins B1, B6, B12, and D. It also controls 62.33% of the global market of vitamin C, and three of the five powers are dependent on China for their supply: Australia (83.49%), Canada (57.68%), and the US (74.49%). Vitamin C, or ascorbic acid, not only has health benefits, but it also serves as a key food preservative.¹¹¹

In the late 1970s and early 1980s, several big Chinese drug companies, backed by the Chinese Academy of Sciences, devised a method to reduce the five-step process for making the vitamin to a two-step fermentation. This method cut the cost of production and gave China a manufacturing edge. China was not able to fully exploit this advantage, however, until 1997, when European and Japanese producers were accused of price-fixing by both the US and the European Commission. This allowed Chinese producers to enter the market.¹¹² In doing so, however, these Chinese companies formed their own vitamin C cartel in the early 2000s, leading to price increases of up to 600%.¹¹³ When US businesses sued the Chinese companies for antitrust violations, the Chinese government asserted in federal court that Chinese law required its domestic companies to fix prices and control exports of vitamin C to the US.

Today, only one Western company – the Netherlands' DSM – produces vitamin C, and it does so at only one factory – at Dalry, in Scotland.¹¹⁴

Vitamins are essential for human health, and being dependent on a single country to produce the bulk of the world's supply puts the world in a vulnerable position. Some countries have recommended that their citizens take additional supplements of Vitamin D during lockdowns connected to the COVID-19 pandemic.¹¹⁵ According to Sky News, the supplement is also being issued to British soldiers.¹¹⁶ As China controls the five powers' supply of vitamins, it could charge their citizens and patients higher prices, or extort concessions from their governments to keep prices affordable.

4.6.5 Magnesium

China's share of global magnesium production has increased markedly over the last three decades, from 5% in 1993 to 80% in 2018.¹¹⁷ The increase was driven by a Chinese surge in construction, which led to huge increases in magnesium demand. This demand was met by intensive exploitation of China's reserves of ore and other natural sources of magnesium, which are the second largest globally after Russia's.¹¹⁸ China then began large-scale export, at prices that soon undercut almost all global competition. No new (as opposed to recycled or

¹¹¹ Scherer, R. and P. Ford, 'China's grip on key food additive', *Christian Science Monitor*, 20 July 2007, available at: <https://www.csmonitor.com/2007/0720/p01s01-woap.html>, last visited: 5 May 2020.

¹¹² Johnson, T., 'China has cornered the global market for vitamins', *McClatchy DC*, 2 June 2007, available at: <https://www.mcclatchydc.com/news/nation-world/world/article24464704.html#storylink=cpy>, last visited: 5 May 2020.

¹¹³ 'Testimony of Rosemary Gibson', *United States-China Economic and Security Review Commission*, 2019.

¹¹⁴ 'Vitamin C Overview', *DSM*, undated, available at: <https://www.dsm.com/markets/human-nutrition/en/products/vitamins/vitamin-c.html>, last visited: 5 May 2020.

¹¹⁵ Roberts, M., 'Coronavirus: Should I start taking vitamin D?', *BBC News*, 23 April 2020, available at: <https://www.bbc.co.uk/news/health-52371688>, last visited: 5 May 2020.

¹¹⁶ Haynes, D., 'Coronavirus: UK troops given insect repellent Citriodiol as part of "enhanced" protection', *Sky News*, 24 April 2020, available at: <https://news.sky.com/story/coronavirus-uk-troops-given-insect-repellent-citriodiol-as-part-of-enhanced-protection-11978318>, last visited: 5 May 2020.

¹¹⁷ 'Demand for Magnesium Growing', *Financial Tribune*, 6 July 2018, available at: <https://financialtribune.com/articles/world-economy/89336/demand-for-magnesium-growing>, last visited: 5 May 2020.

¹¹⁸ 'Magnesium resources, reserves and production', *Asian Metal*, undated, available at: <http://metalpedia.asianmetal.com/metal/magnesium/resources&production.shtml>, last visited: 5 May 2020.

reclaimed) magnesium is now made in Western Europe, and there is only one company left in the US making new magnesium from local raw materials (as opposed to via recycling).¹¹⁹

Magnesium/aluminium alloys are key requirements for use in construction, as is steel purified using magnesium. China's dominant trade share of magnesium metal and alloys, in tandem with construction steel, multiplies magnesium dependency for its customers overseas. Magnesium used in electronics and the casings of laptops, cameras and mobile phones, as well as many other goods of which China is a major exporter, contributes to the same effect. As a result of this, the UK and the EU,¹²⁰ the US¹²¹ Australia¹²² and other states class magnesium as a critical material.

The importance of assured magnesium supplies will grow as world industry adopts new technologies. Magnesium's low mass and its strength in alloys, especially when mixed evenly with specialised nanoparticles, as well as the useful properties of certain magnesium compounds, make it an important component of innovation in energy, transport, construction, IT and other core industrial sectors.¹²³

Magnesium is increasingly important in new technology aimed at reducing carbon emissions, through favourable mass-to-strength ratios in numerous transport applications, as well as high performance coupled with low cost in novel rechargeable batteries that will play a crucial role in the electric car industry.¹²⁴ Use of magnesium alloys – more than 70% lighter than steel components of comparable strength – reduces the weight, and hence the fuel consumption, of vehicles and aircraft.¹²⁵ China has signalled plans to increase the amount of magnesium used in cars from around 8.5kg in 2017 to 45kg by 2030; other producers may follow.¹²⁶

Magnesium can be made by many distinct processes, some with large carbon footprints. China's domination of the world magnesium trade was boosted by extracting magnesium using vast quantities of cheap local coal. This method is rapidly being phased out under carbon emission regimes.¹²⁷ The only new Chinese magnesium plant commissioned recently uses electrolysis rather than coal. Though more than half of China's electricity still comes from burning coal, electrolysis of magnesium is much greener than the old method.¹²⁸

¹¹⁹ 'Written Comments of US Magnesium LLC', *United States Department of Commerce Bureau of Industry and Security*, 23 June 2017, available at: <https://www.bis.doc.gov/index.php/232-aluminum-public-comments/1946-us-magnesium-alum-public-comment-pdf/file>, last visited: 5 May 2020.

¹²⁰ 'Critical raw materials', *Minerals UK*, undated, available at: <https://www.bgs.ac.uk/mineralsuk/statistics/criticalRawMaterials.html>, last visited: 5 May 2020.

¹²¹ 'Interior Releases 2018's Final List of 35 Minerals Deemed Critical to U.S. National Security and the Economy', *US Geological Survey*, 18 May 2018, available at: <https://www.usgs.gov/news/interior-releases-2018-s-final-list-35-minerals-deemed-critical-us-national-security-and>, last visited: 5 May 2020.

¹²² 'Outlook for Selected Critical Minerals: Australia, October 2019', *Australian Government: Department of Industry, Innovation and Science*, October 2019, available at: <https://www.industry.gov.au/sites/default/files/2019-10/outlook-for-select-critical-minerals-in-australia-2019-report.pdf>, last visited: 5 May 2020.

¹²³ Nie, K. et al., 'Development of SiC Nanoparticles and Second Phases Synergistically Reinforced Mg-Based Composites Processed by Multi-Pass Forging with Varying Temperatures', *Materials* 11:1 (2018), p.126.

¹²⁴ Randall, C., 'EU Project researching new magnesium batteries', *Electrify.com*, 3 January 2019, available at: <https://www.electrify.com/2019/01/03/eu-project-researching-new-magnesium-batteries/>, last visited: 5 May 2020.

¹²⁵ 'Magnesium is the metal of the future!', *Alliance Magnesium*, undated, available at: <http://alliancemagnesium.com/magnesium/metal-future/>, last visited: 5 May 2020.

¹²⁶ 'Magnesium Metal: Outlook to 202, 13th Edition', *Roskill*, 31 July 2020, available at: <https://roskill.com/market-report/magnesium-metal/>, last visited: 5 May 2020.

¹²⁷ 'Outlook for selected critical minerals in Australia 2019 report', *Australian Government: Department of Industry, Innovation and Science*, September 2019, available at: <https://www.industry.gov.au/data-and-publications/outlook-for-selected-critical-minerals-in-australia-2019-report>, last visited: 5 May 2020.

¹²⁸ Singh, S., 'World Magnesium Conf: QingHai SaltLake starts Mg production at its 100,000-tpy facility', *FastMarkets MB*, 23 May 2017, available at: <https://www.metalbulletin.com/Article/3719276/WORLD-MAGNESIUM-CONF-QingHai-SaltLake-starts-Mg-production-at-its-100000-tpy-facility.html>, last visited: 5 May 2020.

Since 2017, growing environmental pressure on Chinese production has led to a fall in global magnesium supplies.¹²⁹ In parallel, the prices of magnesium ores show a gradual increase. This may benefit Australia, which has the world's fifth-largest share of magnesium ores.¹³⁰ It is likely to increase exports of magnesium precursors, and perhaps in due course to start selling magnesium made using low-carbon retrieval processes.¹³¹ Other countries with suitable resources and production capabilities are also likely to engage more in a diversifying global market for magnesium and its precursors.

As of 2018, Canada and the US were the world's second- and third-largest importers of magnesium.¹³² Measured at a sector level, Australia and Canada are strategically dependent on Chinese magnesium. However, this dependency is far outweighed by the dependency in the category of magnesium of a purity greater than 99.8% in which Australia, Canada, New Zealand and the UK are dependent on Chinese imports. They import 100%, 79%, 99.97%, and 50.4% respectively of their supply from China.

Individual countries among the five powers have addressed dependency on China for magnesium in a variety of ways. For 15 years, the US has blocked imports of Chinese magnesium.¹³³ Others continue imports in parallel with recycling. As a result, levels of dependency vary considerably, involving complex interplays of trade in magnesium-linked commodities.

¹²⁹ 'Magnesium production volume in China from 2014 to 2018 (in 1,000 metric tons)', *Statista*, available at: <https://www.statista.com/statistics/1072519/china-magnesium-production-volume/>, last visited: 5 May 2020.

¹³⁰ 'Outlook for Selected Critical Minerals: Australia, October 2019', *Australian Government: Department of Industry, Innovation and Science*, October 2019.

¹³¹ 'Latrobe Magnesium – extracting magnesium from Australia's brown coal waste', *Australian Government*, 10 October 2019, available at: <https://www.business.gov.au/Grants-and-Programs/Research-and-Development-Tax-Incentive/Customer-Stories/Latrobe-Magnesium>, last visited: 5 May 2020.

¹³² 'Outlook for Selected Critical Minerals: Australia, October 2019', *Australian Government: Department of Industry, Innovation and Science*, October 2019.

¹³³ 'US to keep antidumping duty on China's magnesium', *China Daily*, 11 February 2011, available at: http://www.chinadaily.com.cn/world/2011-02/11/content_11985399.htm, last visited: 5 May 2020.

5. How might the five powers “decouple” from China?

Instead of integrating into the rules-based international system as a responsible stakeholder, China has exploited the willingness of the five countries (and many other democracies) to deindustrialise their economies and to offshore their manufacturing industries through hyper-globalisation. Although many countries exploit loopholes or even ignore certain rules in relation to international trade, the scale of China’s predatory behaviour has transformed into it a strategic challenge without equal. As a result of the way China’s regime has exploited the COVID-19 pandemic, international concern has grown. This has particularly prevalent amongst the five powers, alongside others such as Japan and South Korea. Who have previously done much to facilitate China’s dramatic economic rise to power.

However, action to decouple from China economically will prove difficult politically – as well as being expensive, at least in the short to medium term. It may, for example, even require revisiting the role and membership of the World Trade Organization.

The five powers have become so dependent on China for a number of exports that they may not be able to regenerate self-sufficiency across all strategic sectors, even those that underpin existing critical infrastructure. Consequently, their focus should instead be on “forcing breakthroughs in frontier technologies that China does not yet dominate, rather than chasing after China’s production of existing products.”¹³⁴ Though this does not mean that the five powers should disregard the strategic industries that support their critical infrastructure, they should nonetheless put supreme effort into developing their industrial and technological bases. Maintaining the initiative within the “Future 9” – the strategic industries of the Fourth Industrial Revolution – is vital to the five powers’ long-term national success and prosperity.

However, before definitive action can be taken, the five powers’ should understand the extent of their economic dependency on China. In this respect, each country should:

1. Implement national legislation to conduct and publish audits at national and company level, so as to identify where dependency on China exists in relation to raw materials, components and complex supply chains.
2. Undertake a national review of strategic industries to identify and prioritise those that require protection from dependency on China.
3. Review bilateral investment treaties and free trade agreements, to assess how effectively they manage risk from strategic dependency on China.
4. Review existing trading partnerships to identify ways in which increased cooperation could reduce strategic dependency on China.

Beyond this, there are three forms of active decoupling which the five powers could undertake to enhance their national autonomy over strategic industries. These are: “negative decoupling”, “positive decoupling”, and “cooperative decoupling”. These forms of decoupling are not mutually exclusive. They can also be used offensively to compel or deter China economically.

5.1 Negative decoupling: restricting China in relation to strategic industries

Even Adam Smith – the “father of free trade” – made clear that it was undesirable for a country to become dependent on its neighbours for military equipment, lest it become unable to protect itself due to reliance on foreign supplies. He wrote:

¹³⁴ Goldman, David P., ‘US-China decoupling: a reality check’, *Asia Times*, 14 April 2020, available at: <https://asiatimes.com/2020/04/us-china-decoupling-a-reality-check/>, last visited: 7 May 2020.

It is of importance that the kingdom depend as little as possible upon its neighbours for the manufactures necessary for defence; and if these cannot be maintained at home, it is reasonable that other branches of industry be taxed in order to support them.¹³⁵

When Smith wrote this, the fields of enterprise necessary for war were largely limited to iron foundries, textile mills, arsenals and dockyards. In Britain's case, these produced the warships with which the Royal Navy secure maritime communication lines and prevented continental European powers from making landfall on the British Isles or overseas territories.

Today, the situation is more complex, intensifying Smith's recognition of the need for sovereignty over defence. Defending the realm has now expanded to include critical infrastructure, including the technological and industrial base that should provide a country with a head start in the emerging economic sectors of the Fourth Industrial Revolution.

Moreover, countries such as China and Russia have turned on its head Carl von Clausewitz's dictum – that war “is the continuation of policy with the addition of other means” – to the extent that peace and war have begun to overlap. Consequently, the scope of “defence” in Smith's time has now greatly expanded.¹³⁶ In the words of General Sir Nicholas Carter, the Chief of the Defence Staff:

What constitutes a weapon in this grey area no longer has to go “bang”. Energy, cash – as bribes – corrupt business practices, cyber-attacks, assassination, fake news, propaganda and indeed military intimidation are all examples of the weapons used to gain advantage in this era of “constant competition”.¹³⁷

In other words, in the current era of constant competition between major powers, the means and sectors of conflict have expanded exponentially. Revisionist powers, such as China, compete in the military, political, economic and cultural domains. They use increasingly sophisticated propaganda and narrative-shaping campaigns, often with the purpose of asserting geographic spheres of interest.

Therefore, it is necessary to restrict Chinese influence over strategic industries that uphold the five powers' critical infrastructure and technological leadership. Negative decoupling measures could be achieved if each of the five powers decided to:

1. Adopt legislation and establish mechanisms to constraining Chinese entities from raiding, gaining control over or draining technical and intellectual property assets related to its strategic industries.
2. Expand powers to act punitively against Chinese enterprises that have engaged in unfair trading practices. This might entail the other four powers of the Five Eyes mirroring the US Entity List system.
3. Enact incremental legislation, at national level, to reduce import dependencies on China, particularly those that undermine autonomy over strategic industries.

¹³⁵ Smith, A., *An Inquiry Into the Nature and Causes of the Wealth of Nations, Vol. II* (London: W. Strahan and T. Cadwell, 1778), p.105.

¹³⁶ According to General Sir Nicholas Carter, Chief of the Defence Staff, “This form of warfare perhaps turns the lausewitzian dictum that war is an extension of politics upside down – political warfare is war by other means.” See Carter, N., ‘Annual Chief of the Defence Staff Lecture and RUSI Christmas Party 2019’, *Royal United Services Institute*, 5 December 2019, available at: <https://rusi.org/event/annual-chief-defence-staff-lecture-and-rusi-christmas-party-2019>, last visited: 5 May 2020.

¹³⁷ Carter, N., ‘Dynamic Security Threats and the British Army’, *Royal United Services Institute*, 22 January 2018, available at: <https://rusi.org/event/dynamic-security-threats-and-british-army>, last visited: 5 May 2020.

5.2 Positive decoupling: establishing a national framework to encourage strategic industries to flourish

The free trade principle that dictate that it is economically disadvantageous to protect national industries from foreign competition is convincing, in most circumstances. Efforts to protect inefficient industrial activities from foreign competition often result in these industries becoming increasingly inefficient and obsolete. In this process, the price of goods for domestic consumers increases, thereby damaging the economy.

However, it is also plainly deleterious to allow revisionist rivals to gain ascendancy over production, particularly when strategic commodities are concerned. In much the same way as he warned against undue dependence on neighbours for national defence, Smith had no qualms about protecting specific industrial activities. As he put it:

... it will generally be advantageous to lay some burden upon foreign industry for the encouragement of domestic industry ... when some particular industry is necessary for the defence of the country.¹³⁸

In recent decades, the Five Powers have failed to develop effective strategies to modernise national industry and infrastructure. A case in point is high-speed rail. China now has considerably more high-speed rail in operation, and almost as much under construction, as the rest of the world combined.¹³⁹ Based on population, China has just 40,672 people per kilometre of high-speed track, whereas the US has 450,344 people and the UK has 600,761 people.¹⁴⁰ Australia and New Zealand have no high-speed railway track at all.

The five countries could undertake ‘positive decoupling’ by developing national industrial and infrastructure strategies to promote market conditions conducive to the expansion of next-generation industries (the “Future 9”), or even to “reshore” those sectors which have been eroded by China.

Each of the five countries ought to:

1. Adopt a national economic strategy to ensure secure access to goods required to meet strategic industrial needs, including by reviving or adjusting domestic production capability.
2. Develop a national infrastructure strategy to reduce dependencies caused by revisionist market distortions, so as to strengthen autonomy over:
 - o electronic communications, transportation, and other key national infrastructure;
 - o indigenous in skills in Scientific, Technology, Engineering and Mathematical (STEM) subjects;
 - o funding and other support for research and development needed to uphold and restore technological leadership over strategic industries, particularly the “Future 9”.

¹³⁸ Smith, A., *An Inquiry Into the Nature and Causes of the Wealth of Nations*, Vol. II, p.49.

¹³⁹ ‘High Speed Lines in the World (Summary)’, *International Union of Railways*, 2020, available at: https://uic.org/IMG/pdf/20200227_high_speed_lines_in_the_world.pdf, last visited: 5 May 2020.

¹⁴⁰ According to data from the United Nations Population Division, the population of China is 1,439,324,000, the population of the US is 331,003,000 million and the population of the UK is 67,886,000. See ‘World Population Prospects 2019’, *United Nations Department of Economic and Social Affairs*, 2019, available at: <https://population.un.org/wpp/DataQuery/>, last visited: 5 May 2020.

5.3 Cooperative decoupling: enhancing collaboration among the five powers and their international partners

Besides negative and positive measures, the five powers could also decouple from China by means of greater mutual economic cooperation and by diversifying supply chains with other rules-abiding countries. Earlier economic and commercial pacts – some organised to include partners connected by geography – have attempted to achieve this, but the five powers have not necessarily felt comfortable inside them.

Given the basis in intelligence-sharing, military interoperability and historical ties, between the five powers, they could sensibly extend their mutual cooperation into wider spheres, where shared fiscal and economic cultures exist. The critical five has become a forum for sharing understanding on what critical infrastructure means. Extending this cooperation further could create a new economic and regulatory nucleus around which other like-minded partners could assemble. The major cities of the UK and US already act as the hubs for the global financial system. Wider ranging economic cooperation would have a global impact. Therefore, in pursuit of cooperative decoupling, the five powers would do well to:

1. Ascertain where allied and aligned nations have the capacity to supply goods that the Five Eyes currently import from China.
2. Expand cooperation beyond the Critical 5's current role to cover all areas conducive to reducing strategic dependency on China.
3. Form a working group to examine how to establish a new free trade pact between the five powers.
4. Form a working group to identify means of asserting control over the global standards which regulate the strategic industries of the Fourth Industrial Revolution and the "Future 9".
5. Agree a common plan to limit Chinese investment in domiciled companies involved in strategic industries.
6. Extend cooperation beyond the five powers to include partners in the Indo-Pacific, such as Japan, South Korea, Taiwan, Chile, India, Indonesia and Vietnam, to diversify supply chains and decentralise China as a global industrial hub.¹⁴¹
7. Forge links with multilateral entities such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), the Association of Southeast Asian Nations, the United States-Mexico-Canada Agreement, and the European Union, which have similar interests and concerns.¹⁴²

Underpinned by robust democratic institutions and free economies, the Five Eyes countries have long been at the vanguard of global development. They have regularly stood together to resist revisionist challenges to the rules-based international system. Now they must do so again, with like-minded countries across the world.

More than ever before, the Five Eyes must now cooperate to prevent China expanding unopposed its authoritarian vision for the world.

¹⁴¹ Edel, C., 'Democracies need alliances to secure vital supply chains', *The Strategist*, 6 May 2020, available at: <https://www.aspistrategist.org.au/democracies-need-alliances-to-secure-vital-supply-chains/>, last visited: 7 May 2020.

¹⁴² Three of the five powers – Australia, Canada and New Zealand – are already signatories to the CPTPP. Should the UK and the US join them this would deliver a strong geopolitical message and act as a force for good in promoting free trade in the Indo-Pacific.

6. Contributions from Legislators

What follows are three essays written by current or former politicians from three of the five members of the Five Eyes. In these essays, the authors offer their views on their country's potential responses to the supply-chain security issues raised in this report regarding the five powers' strategic dependencies on China for goods that have uses within either critical national infrastructure or for next-generation industries. The essays highlight the range of policies being considered, and the depth of thought given to them. The essays are written by, in alphabetical order:

Andrew Hastie is the federal member for Canning in the Australian Parliament. He chairs the Australian Parliament's Joint Committee on Intelligence and Security.

Peter MacKay is co-founder of the Conservative Party of Canada and former cabinet minister in the portfolios of Foreign Affairs; National Defence; and Justice and Attorney General of Canada.

Marco Rubio is senior senator for the State of Florida in the United States Senate. He acts as the Chairman of the Small Business Committee and is the Co-Chair of the Congressional-Executive Commission on China.

Bob Seely is a Member of the UK Parliament for the Isle of Wight. He also sits on the Foreign Affairs Select Committee.

Andrew Hastie MP

Australia is a regional power with global interests. As the COVID-19 pandemic has spread across the world, Australia has protected not only the lives and welfare of its own citizens, but also worked with other nations as part of an international response.

Australia has invested in the global search for a vaccine, we have supported our neighbours in the Asia Pacific with vital medical supplies and joined in an Austrian-led group of ‘first mover’ nations including Denmark, Norway, Israel, Czech Republic, Greece and Singapore to share knowledge on how to chart our way through the crisis.

Australia has also played a prominent role in co-sponsoring the recent motion through the World Health Assembly that established an independent review into how COVID-19 began and spread throughout the world. Such a move was consistent with Australia’s values.

Prime Minister Scott Morrison said that ‘countries all around the world would like to know what happened, because we don’t want to see it happen again’ and rightly that we ‘can’t let the trail go cold’.

This push for a review and transparency is entirely reasonable, given the thousands of lives lost and the vast economic and social damage inflicted upon the world. We must learn the lessons of this pandemic.

There has been a mixed response to Australia’s actions, including thinly disguised threats of economic coercion from China’s Ambassador to Australia in our national media.

But should we not be surprised by such a subversive response. In August 2019, Professor Wang Yiwei, a guest of the Chinese embassy visiting Australia, warned of the fate facing Australia if it did not renounce its reliance on the US.

He predicted that Australia might experience the tragedy of being the “first sacrifice” in a new cold war between the US and China. Implicit was the message that Australia’s sovereignty, alliances and interests needed to change.

The seriousness of Australia’s position is coming to light. The research within this report by the Henry Jackson Society demonstrates that Australia is the Five Eyes nation with the most strategic dependence on China. It makes for troubling reading. Australia is dependent on China for material and goods critical to our resources, construction, agricultural and manufacturing industries. We are also dependent on China for pharmaceuticals, fertilisers and medical supplies. In short, Australia is dangerously exposed.

But there are reasons for hope. The reality is that Australia began pivoting to secure our sovereignty in 2017, as events in the South China Sea revealed to the world a revisionist and expansionist national agenda. We have been forced us to set clear boundaries in one of our most important economic and trading relationships.

In 2017, Australian legislators from across the political spectrum opposed the ratification of the Chinese extradition treaty. Whilst controversial at the time, the Australian government shelved the treaty and this decision prefigured Hong Kong’s own resistance to the same legal mechanism.

In 2018, the Coalition government secured the bipartisan passage of the Espionage and Foreign Interference Act. This legislation modernised our criminal code to disrupt the subversive tactics of authoritarian regimes, who use covert means and plausible deniability to advance

their strategic aims. Importantly, this included a new offence of criminalising the theft of trade secrets, protecting Australian businesses and intellectual property from economic espionage.

The Australian government also took the tough decision to secure our 5G network, our political leadership presciently recognising that democratic digital sovereignty is a prime target for authoritarian regimes. And our critical infrastructure and assets are now closely monitored by government on a central register, designed to monitor threats of espionage, sabotage and coercion arising from foreign investment.

Sovereignty, however, must also be safeguarded by transparency. Middle power democracies, like Australia, must protect their public square from foreign interference and malign foreign influence. The public must have faith in the integrity of its political leaders and governing democratic institutions. That is why we have banned foreign donations in our electoral system, and have legislated to require those lobbying on behalf of a foreign entity to register on the Foreign Influence Transparency Scheme.

There is more to be done, however. We must be alert to the reality that authoritarian regimes don't play by the rules. This is nothing new. As Roman Poet, Horace, once wrote: "You can drive nature out with a pitchfork, but she keeps coming back." We must see the world as it is, not as we wish it to be.

Global politics is a realm where irony, paradox and dark shadows abound. We must stay grounded in the realities of history: human nature, self-interest, geography and power shape global markets as much as anything else. Australia's free market and national enterprise is undermined when authoritarian trade partners stack the deck against us. As the rules-based global order comes under greater pressure from revisionist powers, Australia's sovereignty and strategic resilience will be tested in new ways.

Our strategic dependency on critical imports makes us vulnerable to not only economic coercion, but also supply chain warfare. To mitigate this risk, the Australian government should initiate a review of all trade-exposed products, industries and sectors in the economy.

This should be broken down into three main categories. First, goods and material on which we must be self-reliant in times of crisis and consider it prudent to guarantee domestic supply. Second, goods and material for which we are too dependent on authoritarian governments for their provision. Finally, those things for which open, global supply chains should be maintained and encouraged. This will help to establish a clearer picture of our supply chain vulnerability and then drive policy to mitigate those risks.

The Australian government should also consider a strategic industry plan to build national self-reliance in key pharmaceuticals, medical supplies and other critical goods. Certainty should be provided for business to establish local operations and jobs. Encouraging firms to build and expand domestic production capacity will require government support, such as time limited tax incentives. This should be a bipartisan effort.

Sovereign nations must be able to act freely on the world stage. Australia has shown that it is possible for middle powers to assert their sovereignty. Our task now is to build our strategic resilience with likeminded partners in the Five Eyes and beyond.

Hon. Peter Mackay

While the Covid-19 pandemic still rages in Canada — having infected 71,000 and killed more than 5,000 of our citizens — there is mounting evidence of China's negligence in connection with the pandemic.

Instead of seeking cooperation with foreign states during the initial outbreak of the virus, the Chinese government amplified its transmission by suppressing critical data and both repressing and sanctioning Chinese whistleblowers. The government also spread disinformation about its origins and associated risk.

Canada and its allies must hold the Chinese government to account. We must diversify trade away from non-democratic, authoritarian states that do not respect the rule of law or basic human rights. As we transition into a post-Covid economic order, Canada needs to review and secure critical needs and the supply chains that meet them.

Rather than rely on China for critical goods, Canada's strategic interests require us to shift towards partners that align and conform with our rules-based system, the values of freedom and human rights, and that pose no threat to our national security and that of our allies in NATO, the G7, Five Eyes, and beyond.

This will require Canada to re-evaluate our foreign and trade relations based on security considerations, and to limit trade with unpredictable non-democratic states like China and Russia, and others who do not respect the rule-of-law and place Canadians interests at risk or compromise our own global reputation.

Taiwan

Over the last month, the Taiwanese government has generously donated millions of masks to several governments and it has entered into cooperation agreements to fight the Covid-19 pandemic with Australia, the United States, and the European Union. Taiwan has also donated 500,000 desperately needed surgical masks to Canada.

Taiwan shares many of Canada's principles and values including democracy and the rule-of-law. The trade and cultural exchanges between Canada and Taiwan are robust. Canada should immediately join Taiwan, the US, and Japan in the Global Cooperation and Training Framework (GCTF) to learn from Taiwanese experience on a range of issues, including its remarkable success in addressing and controlling the coronavirus outbreak.

Canada along with its allies should review its diplomatic policy towards Taiwan to determine whether current policies dating to the 1970s have become obsolete and an obstacle to advancing Canada's interests and values abroad.

Human Rights

Millions of Hong Kong pro-democracy activists inspired us over the past year when they courageously took to the streets to express their aspiration for freedom and democracy despite the ongoing and escalating threat of arrests and lethal violence by Chinese authorities. The brutality of the Chinese government crackdown on Hong Kong protesters demonstrated the true nature of Chinese Communist policy.

The ruthlessness of Beijing's authorities in Hong Kong was accompanied by news of an unspeakably cruel ethnic cleansing campaign in China's Muslim-dominated western province of Xinjiang.

Magnitsky sanctions, which allow Canada's government to freeze assets and impose visa bans on corrupt officials who engage in human rights abuse, could be applied to Chinese

officials who have been found to have engaged in such abuse in Xinjiang, Hong Kong, Tibet, and those who actively suppressed and falsified information about the COVID-19 outbreak in Wuhan. Those sanctions should be coordinated with our allies in the US, UK, Estonia, Latvia, and Lithuania which already have Magnitsky legislation, and those nations like Australia which will soon be adopting their own versions of the legislation.

Canadian citizens Michael Spavor and Michael Kovrig were arbitrarily detained in December 2019 and have been living in solitary confinement in Chinese prisons for over 500 days. Taken hostage by Chinese authorities in retribution for Canada's detention of Huawei CFO Meng Wanzhou on a US extradition request in accordance with a signed treaty with America, China has made clear the peril of visiting and doing business with the nation. These Canadian citizens must be returned to Canada.

Foreign influence and disinformation

Throughout the Covid-19 crisis, the Chinese Communist Party's primary motivation has been to avoid responsibility and accountability by deflecting blame and suppressing criticism of its handling of the crisis. Regrettably, even Canada has remained mostly silent about China's role.

Chinese government propagandists have promoted many conspiracies about the origins of the outbreak. Chinese diplomats even suggested that the virus may have been a product of an American biological weapons program.

Such campaigns are a natural progression of China's broader (and aggressive) information warfare and influence operations, which have increasingly gone unchallenged in Canada.

A 2019 report by the all-party National Security and Intelligence Committee of Parliamentarians ominously states:

Canada is the target of significant and sustained foreign interference activities from the PRC, the Russian Federation, and other states. The Committee believes that these states target Canada for a variety of reasons, but all seek to exploit the openness of our society and penetrate our fundamental institutions to meet their objectives. They target ethnocultural communities, seek to corrupt the political process, manipulate the media, and attempt to curate debate on postsecondary campuses. Each of these activities poses a significant risk to the rights and freedoms of Canadians and to the country's sovereignty: they are a clear threat to the security of Canada.

This clear threat to Canada's national security has not been properly addressed or fully acknowledged, despite ample evidence over the past several years.

Canada must learn from its allies, including Australia and the US, who have successfully implemented legislation to curb foreign influence.

China's actions during the Covid-19 pandemic should also demonstrate to the Canadian government that it must ban all Huawei 5G technology from its communications infrastructure in order to mitigate any potential vulnerabilities that Chinese intelligence might seek to exploit.

We cannot allow Canada's critical infrastructure, most of which relies on digital communications, to be exposed to a malign foreign regime that has clearly displayed its readiness to punish any state, corporation, or individual that criticizes or disagrees with it. Better, reliable, and safe alternative technologies exist among Canada's democratic allies and should be explored.

Actions speak louder than words. The values-based foreign policy that emphasised calling out terrorist organisations and fortified relations with like-minded countries, which Canada adopted when I served as Minister of Foreign Affairs and National Defence in the Harper

government, could be a model to face this new challenge. The massive recapitalisation of military equipment adopted during that period which heightened the *esprit de corps* of the women and men in the Canadian Armed Forces is needed now more than ever. What is more, we must now work closely with our NATO allies to protect the safety and freedom of people across the world. It is why Canada's security must be ensured by increasing our military and defence spending to meet the 2 percent target set out by NATO.

Canada must stand together with our allies to defend our values and principles: democracy, freedom and human rights, and respect for the rule of law. United, we can protect these values and principles from the alliance of malevolent and aggressive regimes who do not share our basic values and who actively seek to undermine and subvert our societies, our independence, and our best interests.

Senator Marco Rubio

Free and stable democracies like the United States (US), the United Kingdom (UK), Canada, Australia, and New Zealand help advance international peace and generate ground-breaking innovation that enables health and prosperity worldwide, inspiring people across the globe to unleash humanity's potential.

The Chinese Communist Party (CCP), however, is aggressively working to supplant democratic order and governance, as well as the alliances and systems that uphold it – including our Five Eyes partnership. Strategic competition with China is about the fight for democracy against authoritarianism. The CCP's goal is not just to materially enrich its country, but to re-centre the global order around Beijing by making all countries reliant on China for a range of strategic goods – from raw minerals to telecommunication equipment to medical supplies – and by advancing its authoritarian model of government abroad.

This strategic dependence is one of the greatest perils facing each of our five nations and the long-term durability of our international alliance. As the ongoing COVID-19 pandemic makes clear, it renders each of our countries vulnerable to deadly new challenges in public health. It robs our labour forces of vital opportunities for dignified work. And with Beijing's growing dominance over technological infrastructure, it even threatens to erode the sense of security that enables our countries' close ties.

The CCP didn't stumble into this position by accident. In the US, politicians and corporate leaders over decades have worked to smooth over American economic integration with China, offering incentives for businesses to offshore production. Chinese accession to the World Trade Organization only accelerated the process. As we encouraged American businesses to pursue short-term windfalls abroad, the CCP invested in capital development in their own firms to assist them in the long run. We justified our actions by overlooking the CCP's ambitions and economic policies in favour of a false hope that economic integration would change China; instead, it changed us and capitalism itself.

That's because China isn't preparing for an equal playing field; rather, it strives (and has made progress) to overturn the global trade order and rules-based system by stealing intellectual property and market share from international competitors, ensuring that international production first goes to protect Chinese interests.

The global emergency caused by the COVID-19 pandemic, originating in Wuhan, China, has made clear the dangers of this dependence. Chinese capture of supply chains that produce equipment like face-masks and respirators has directly resulted in lives lost across all our countries. For example, after having dominated the production of masks, the CCP directed its manufacturing inward after the outbreak and purchased the remainder of the global supply, denying our countries access. In the US, this meant that some doctors, nurses, and paramedics were initially forced to ration supplies and even forego protective equipment.

Weeks later, once Beijing claimed to have finally slowed the spread of the coronavirus within its own borders, it decided to restart selling medical supplies to the rest of the world to improve its international image. But, as a majority of the Five Eyes countries can attest, many of the products the Chinese *did* sell were defective, placing even more lives at risk.

Now we grapple with the virus's economic impact. The US lacks the level of domestic industrial capacity needed to meet demand for critical medical goods, and today's service-dominated economy is contingent on precisely the kind of face-to-face interactions made impossible by the public health lockdown. As a result, our economy was forced into a hibernative state.

The CCP specifically enumerated biomedicine and high-end medical equipment as elements of its “Made in China 2025” strategic vision. Imagine the consequences should it attain dominance in other industries. Or consider the leverage that China already wields in the event of armed conflict. Without the capacity to produce vital goods that our militaries need, like medicine or rare-earth minerals, our nations are critically vulnerable.

But even outside an acute public health crisis, it is in the national interest to provide our people with dignified, stable work. Our industrial dependence on China has cut against that, with millions of productive jobs in manufacturing now offshore. Communities once supported by industrial plants now suffer from decay, upheaving entire neighbourhoods and families with them. Imported Chinese fentanyl only pours fuel on the fire. When strong, developed economies like those in all five of our countries fail to offer their citizens a sense of opportunity for upward mobility, we diminish the unparalleled promise that our way of life offers to the rest of the world. This is a light we cannot afford to let go out.

China is now offering an alternative model, tantalising developing nations with promises of infrastructure assistance through its Belt and Road Initiative and telecommunications investment via state-controlled firms. It is debt-trap diplomacy, and China collects when projects stall by asserting control over countries’ political systems, risking exposing their internal communications to CCP surveillance.

Unfortunately, this cutthroat strategy now threatens the integrity of international security cooperation even among trusted allies. If Huawei has developed a country’s fifth-generation communications infrastructure, there is ample reason for concern that the CCP might be listening to its conversations. Maintaining the ability to share intelligence and engage face-to-face discreetly without fear of Chinese surveillance is critical to the basic operation of organizations such as our Five Eyes intelligence sharing agreement. But there are larger societal implications. The CCP’s investments in data processing and machine translation will be used to survey social attitudes and behaviour. As the CCP deploys new tools for manipulating public opinion, these infrastructure entanglements not only make us more vulnerable to espionage, including intellectual property theft, but also to attacks on the fabric of our democracy.

Reducing strategic dependence on China must naturally be tailored from country to country. In the wake of the coronavirus pandemic, I have introduced legislation to help return essential medical supply chains to America from China, offering tax breaks to firms that produce pharmaceuticals in the US. In the same vein, I have proposed a co-operative model to spur the creation of supply chains for rare-earth mining, which could be replicated for other industries.

But these efforts cannot only be reactive to the industries that have already offshored. Our countries must furthermore work to make our economies more productive and resilient for the economic challenges that have yet to come. Establishing superiority over industries of the future by federal incentives for productive investment in workers, equipment, and technological advances will be vital.

Many approaches to combating dependence on China will also necessarily be multilateral. When it comes to telecommunications infrastructure, we are already seeing signs of progress. Countries as varied as Japan and Poland – as well as several members of our Five Eyes partnership – are spurring the development of an emerging fifth-generation communications market to compete with Huawei. In the US, we have introduced legislation to form an innovation fund for fifth-generation technology to be used both at home and abroad. By offering coalition-centred strategies to boost resilience, we help ensure that countries are not suffering alone as they endure temporary economic struggles while pursuing independence from Beijing.

China is devoting a whole-of-state effort to reshape the global order with a communist regime at its centre; building a future more resilient to its strategic machinations will be an exacting challenge for all five of our countries. But achieving that level of independence will be critical to sustaining the integrity of the Five Eyes partnership and our ability to support each other on national security issues, as well as defend democratic order and the aspirations of free people. How we respond to the challenges posed by China will define the 21st century. Democracy and freedom are superior to forms of repressive authoritarian governments, and we must ensure that we continue to defend the principles that our Founding Fathers so wisely enshrined in the establishment of our nation.

Bob Seely MP

Twenty years ago, Western countries collectively believed that a modernising China would become 'like us'. It hasn't. Sadly, it is moving further away. Yet, some Western powers still clings to this outdated and damaging belief. Even the Foreign and Commonwealth Office now realises that a reappraisal of China is overdue. If liberal Western democracies are to remain the model for global development, a new approach is needed.

China has cleverly tried to break down multi-lateral solidarity by playing countries off against each other. It has worked. We, in the UK, have got ourselves into a bind. The so-called "golden decade" of Chinese-UK relations, which was heralded in 2015, looks, at best, well-intentioned but naïve. Over two millennia ago, the great Chinese strategist Sun Tsu wrote that the greatest of victories required no battle, and that subduing the enemy without fighting represented the epitome of skill. We are in danger of allowing both.

So how should the UK engage? What can we do? And how should we coordinate our response with like-minded countries?

First, we need to defend our values and interests. Former Australian Prime Minister Kevin Rudd told our Foreign Affairs Committee last year that weakness in defending our interests generated contempt from Beijing. Indeed, Australia is a useful example. It is an Indo-Pacific nation that sends a third of its exports to China. It is dependent on Chinese trade in a way that the UK will never be. Yet it blocked Chinese firms, namely Huawei, from its fifth generation communications network and enacted legislation to deter foreign agents.

Second, we need to treat the Chinese state in the same way we do Russia. We need to set up a cross-government group to study its multi-faceted forms of influence and power projection. After Russia went to war with Ukraine in 2014, the UK government established such a group to understand and analyse Russia's malign behaviour in the fields of politics and information warfare, economics, energy, military issue, espionage and cyber. The balance with China will be different. Russia focuses on the tactics developed by the former KGB: disinformation, political corruption and espionage. China, by contrast, appears to use economic power, combined with the cultivation of industrial groups and individuals in and around the political and economic worlds. Both practise cyber-attacks.

Third, we need to realise that trade is strategic. We need to overhaul to whom we sell high-tech and cutting-edge firms. It is clear that the UK is dangerously *laissez-faire*, especially in relation to China's mercantilist Communism, where trade is used as a strategic objective in part to dominate others. By highlighting the West's growing strategic dependency on China as well as China's desire to dominate some sectors of the global economy, this report will help shape the actions of democratic countries worldwide. A more robust framework would look not only at current risk, but potential use in future across a range of areas, including Artificial Intelligence and high-performance computing. We need a continued commitment to free trade, but to be fully-free, trade must also be fair.

Fourth, the UK government must, as several of our allies and partners have done, block high-risk vendors from our advanced communications infrastructure. The decision by the government to allow Huawei any share of the UK market is flawed. Huawei, effectively part and parcel of the Chinese party-state and a tool to realise its global ambitions, is a threat to fair competition, to privacy, to security, and to our country's freedom of action. Banning high-risk providers from advanced communications systems is not a cure-all, but it is an important element in developing a secure system and a geographically diversified communications industry.

Fifth, if we claim to care about human rights then we need to act as if we do. It is bizarre that the UK seeks to champion human rights issues globally, when our position toward China is akin to the three monkeys who neither see, hear, nor comprehend any evil. The oppressive surveillance by China of a million or so Uyghurs is a global human rights issue, as are allegations that these same people have been sent to forced labour camps. The recent arrest of activists in Hong Kong, the tasteless disinformation campaigns by the Chinese state over the origins of Covid-19 and the intimidation of Taiwan highlight an intimidating trend.

Sixth, we must ensure freedom of expression for Chinese students in British universities. We should welcome Chinese students to the UK, but not the surveillance state that accompanies them. In many democratic countries, China's Confucius Institutes are seen as fronts for malign Chinese influence. Some countries, including Sweden, have now shut them. But, yet again in the UK, we take no action. Unless Confucius Institutes are fully committed to free speech – including the discussion of human rights in Hong Kong and amongst China's Muslim minority, as well as issues such as Tibet, Taiwan and Tiananmen Square – they should be closed. In addition, we should refuse some Chinese PhD students who have come here ostensibly to study, but in reality are members of China's Armed Forces or security services tasked with stealing intellectual property in cutting-edge fields.

If those are some things we can do or change in the UK, we also need to recognise that putting real pressure on China to rethink its current “wolf diplomacy” will only happen with international coordination. So, seventh, as well as robust defending our interests, we need to be at the heart of a new international approach to China. This should be rooted in the Five Eyes group, but vitally we must work with NATO, the EU, and Indo-Pacific partners such as Japan, Taiwan and South Korea.

We need to develop a more robust attitude generally to defend multi-lateral institutions, whether the World Trade Organization (WTO), the World Health Organization (WHO), UN technical bodies, or international sporting bodies, such as football's FIFA. We need to know what organisations China (and Russia) are trying to influence and even subvert.

On the WTO, we need reform. China is still seen by the WTO as a developing nation, enjoying special treatment. In reality, the current WTO status enable's China's sweetheart deal at the expense of democratic nations. The WTO needs reform, and with it, a change in China's role to that of a developed nation. As an element of reform, China needs to make significant movement on internal standards. In practical terms, that means closing so-called “wet markets”, where dead and alive animals are sold, which are not only a viral hazard but morally repellent.

The WHO needs change too. China has almost certainly broken the WHO's International Health Regulations established in 1969 and updated in 2005. China is influential in the WHO, while the US and UK have been its largest contributors. If we are paying the lion's share, but allow others to hold sway, is that an example of others' strength or our weakness? The UK should not withdraw from the WHO, as the US has done, but we should ensure that our voice is heard more clearly and the organisation is not subverted through the political manipulation of others.

Next, we have to stop turning a blind eye to cyber-attacks. Cyber-attacks are a form of warfare, and Chinese hackers have stolen the sensitive personal details of millions of Brits and Americans. We need a sanctions regime to respond to this, with the potential for targeted against individuals and organisations.

The divided democracies are now in danger. And here perhaps Sun Tsu can help us again. He wrote that defence against defeat comes from knowing both oneself and one's adversaries. So, we need to recognise the threat that China now poses, seek to manage and moderate it, but to do so while defending ourselves and values, our strategic interests and partnerships.

The 21st century identifies two visions for the future of humanity. The first is the liberal-democratic model of a law-governed society, universal rights and limited government. The second is the new authoritarian model championed by China (and other states) where freedoms are aggressively curtailed, politicians and party machines are above the law and where surveillance, aided by big data and Artificial Intelligence, leads both science and humanity to a darker future.

Those that govern us need to wake up to this reality and stop clinging to a future that has not materialised. We need to reduce our dependency on China and assert a new future with Beijing that defends our economic, ethic and political values, not undermines them. That is the best way for us, and also for China.

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