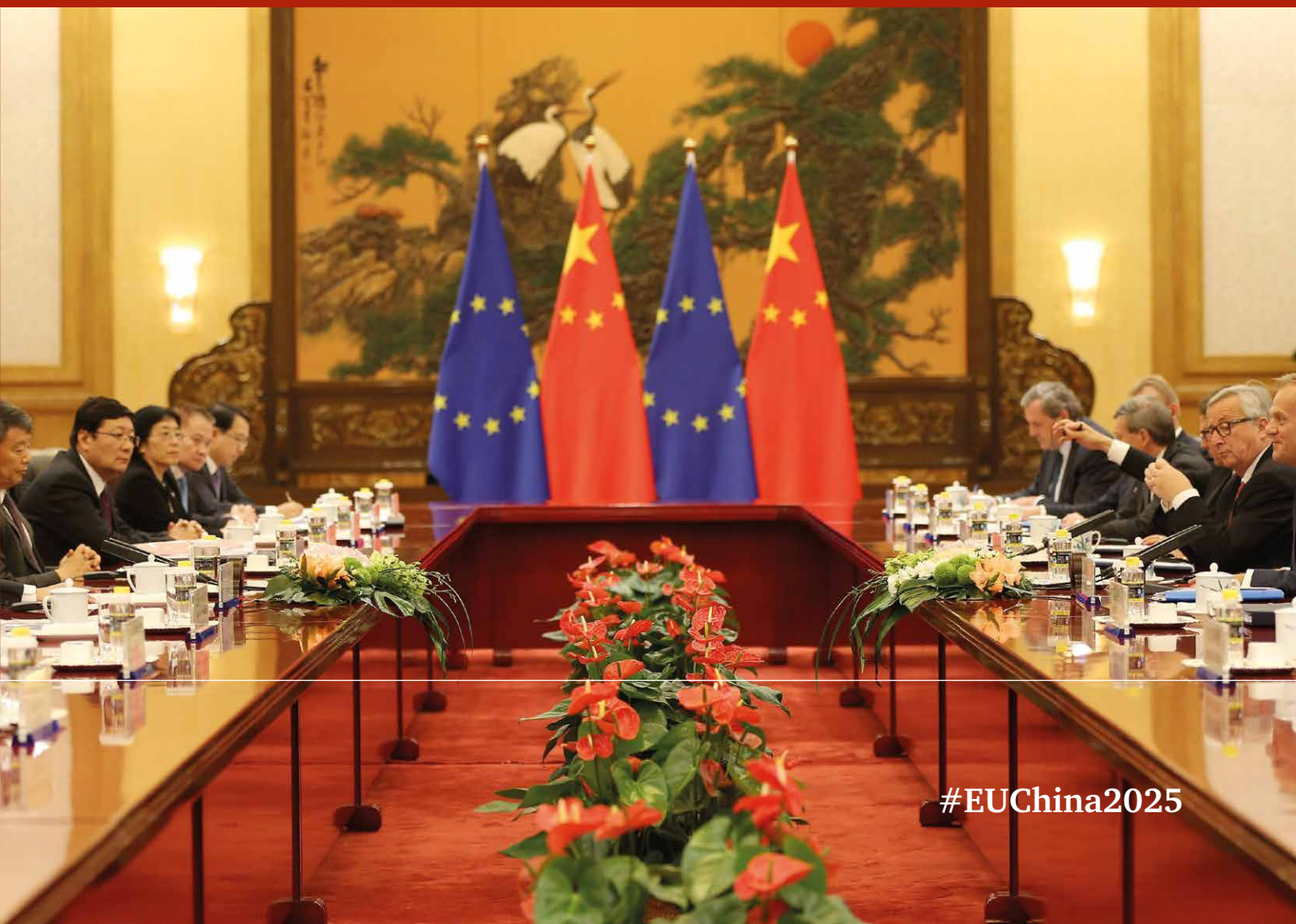
A Joint Report by Bruegel, Chatham House,
China Center for International Economic Exchanges
and The Chinese University of Hong Kong
Alicia García-Herrero, K.C. Kwok, Liu Xiangdong, Tim Summers and Zhang Yansheng

EU–China Economic Relations to 2025

Building a Common Future



#EUChina2025

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CCIEE 中国国际经济交流中心 China Center for International Economic Exchanges

CHATHAM HOUSE The Royal Institute of International Affairs

香港中文大學 The Chinese University of Hong Kong

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The Royal Institute of International Affairs

Chatham House
10 St James's Square
London SW1Y 4LE
T: +44 (0) 20 7957 5700
F: + 44 (0) 20 7957 5710
www.chathamhouse.org

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Directors' Statement

In the four decades since China and the European Economic Community (EEC) established bilateral relations in 1975, both have changed enormously. China has risen to become the world's largest economy in purchasing power parity terms, and the EEC has been transformed into the European Union, the world's largest single market, with a common currency and free movement of goods, capital, services and labour. Given this process, it was perhaps inevitable that the EU has become China's largest trading partner, and that China is the EU's second-largest export market and main source of imports.

Nonetheless, there is a general sense on both sides that decision-makers in Beijing and Brussels, as well as in other EU capitals, are yet to bring to fruition the full potential of their relationship, be it in trade and investment, industrial cooperation or global governance, and in respect of climate change in particular. Against a background in which the United States is increasingly drawing into question its commitments to free trade and the global commons, and with the uncertainty resulting from Brexit, there clearly exists a need for China and the EU not only to increase the breadth and depth of their cooperation, but also to act more strategically in the way they relate to each other.

Strengthening EU–China relations will not be easy. In fact, this report documents the hurdles and differences in views that exist as well as the opportunities. The continued difference in economic systems poses challenges for further collaboration, and policymakers need to be frank about this if they wish to harvest the huge potential of deeper trade and investment linkages. Perhaps the best starting point where broad agreement could be found is in the area of climate policies. Both China and the EU are concerned by the issue. The topic is of such importance that it cuts across many other aspects of the relationship. For example, increasing connectivity through China's Belt and Road Initiative (BRI) and the EU's Juncker plan for strategic investments offers the opportunity to immediately build infrastructure in a climate-friendly way. Greater cooperation in science and innovation, as well as exchanges of people, also holds promise as an area in which progress can be made relatively easily.

Over the past 18 months, staff from each of the four institutions we lead have assessed relations between the EU and China from a variety of different angles, from the broad to the specific. This report synthesizes the main insights and conclusions from the collective workshops in Beijing, Brussels, Hong Kong and London, and from the various papers produced by the individual researchers. It offers a series of recommendations on ways to maximize opportunities and minimize the risks facing this bilateral relationship that is crucial to the health of the global economy.

We are delighted, therefore, to present this report to policymakers and the public, and hope that it might provide a useful point of departure for both sides to think creatively about how to bring their indispensable relationship to the next level.

We would like to thank the staff of our four institutes for all their hard work on the EU–China 2025 project. We are also very grateful for the support of the members of our Senior Advisory Group, chaired by Romano Prodi, President of the European Commission (1999–2004) and Zeng Peiyan, Vice Premier of the People's Republic of China (2003–08), who provided invaluable input are listed overleaf.

Professor Lawrence J. Lau, The Chinese University of Hong Kong
Dr Robin Niblett, Chatham House
Dr Guntram Wolff, Bruegel
Mr Zhang Xiaoqiang, China Center for International Economic Exchanges (CCIEE)

Senior Advisory Group

Executive Summary

Background

The European Union (EU) and China have much in common. Their GDPs (€14.72 trillion and €9.75 trillion, respectively, in 2015) rank number two and number three in the world, behind the United States (€16.64 trillion). They are two of the most externally-integrated economies in the world, with annual international trade in goods and services of €15 trillion (€5 trillion if only trade external to the EU is considered) and €4.75 trillion, respectively, in 2015. Their annual bilateral trade in goods and services stood at €580 billion in 2015, with each being the other's largest source of imports and second-largest export destination. Both EU and Chinese leaders believe that effective rules-based multilateralism should form the core of global governance. The two are also not security competitors.

At the same time, the United States is stepping back from playing a leadership role in support of more open global markets and there are profound concerns across the world about the negative impacts of globalization on income inequality. This overall shift makes it an especially important moment for the EU and China to consider how to deepen the full range of their bilateral economic relationship – by increasing trade and investment, promoting cooperation in the areas of climate change, energy and the environment, and global governance, collaborating in science, technology and innovation, infrastructure, and financial services, and engaging in people-to-people exchanges. These efforts can be mutually beneficial – they help to sustain economic growth, create jobs and improve levels of social welfare not only within their own societies but also globally.

Trade in goods has been the driving force in the EU–China economic relationship. Bilateral trade in goods grew by an average of 14.4 per cent each year between 2001 and 2011, and, although the growth rate declined to 3.6 per cent between 2011 and 2016, trade in goods has rebounded since the beginning of 2017. With the EU recovering well from a protracted financial crisis, and China committed to sustaining annual GDP growth above 6 per cent as its economy undertakes further reform and opening, there are significant opportunities for the two sides to further deepen their economic relationship in the future.

However, beyond trade in goods, many areas of economic interaction remain under-developed, including trade in services, levels of foreign investment, cooperation on industrial and technological innovation, and financial market integration. Chinese imports of services grew at an average annual rate of more than 25 per cent between 2010 and 2015, and the EU's trade surplus in services with China has been growing at an average annual rate of 37 per cent since 2010, reaching €11 billion in 2015. Current stocks of the cumulative direct investments of the EU and China in each other do not reflect their overall weight in the global economy or the extent of their trade. In 2015, the stock of EU foreign direct investment (FDI) in mainland China (not including Hong Kong) amounted to €168 billion, and investment stock from mainland China in the EU was only €35 billion (€115 billion including Hong Kong), even though Chinese investment flows into the EU have grown substantially in recent years. This contrasts with the stock of EU FDI in the US of €2.6 trillion and US FDI stock in the EU of €2.4 trillion. The low stocks to date show that there is scope for an enormous increase in the coming years and decades in investment in both directions.

Growing Chinese consumption, especially of services, has the potential to create new markets for European businesses, while rising Chinese investment in the EU, in addition to increasing EU GDP and employment, also provides Chinese companies with a platform to improve their global competitiveness.

However, elevating the EU–China economic relationship into the genuine strategic partnership envisaged by EU and Chinese leaders will require greater effort from both sides. On the one hand, many EU business leaders perceive Chinese companies as sources of unfair competition, in both the EU and Chinese markets. On the other hand, Chinese companies worry that the EU can impose policy measures against them, such as anti-dumping and countervailing duties, which are perceived in China as unfair. Moreover, EU leaders are distracted by a full policy agenda, ranging from eurozone reform to negotiating Brexit.

China is also in the midst of a complex economic transition. Structural changes under way in its economy and slower rates of growth are creating new challenges for European and Chinese businesses operating there. The impact of new technologies and innovation is likely to intensify disruption to existing business models as much as provide new economic opportunities. In these circumstances, differences over the role of the state in their respective economies mean that the European and Chinese economic models are unlikely to converge in the foreseeable future. Significant differences between the political and economic systems of the EU and China add to the challenges of deepening their bilateral economic ties.

Recommendations

Given this mix of challenges and opportunities, it is important that EU and Chinese leaders pay more attention to their bilateral strategy and consider how deepening their economic relationship between now and 2025 could bring mutual benefits. This means building on the existing EU–China 2020 Strategic Agenda for Cooperation, re-stating their common interests in the new global context, while also recognizing more candidly their differences, and prioritizing progress where it is achievable and where relations are currently under-developed. The over-arching goal should be to promote sustainable, balanced and inclusive growth of both economies.

Specifically, the EU and China should:

1. Conclude an investment agreement as soon as feasible

The ongoing EU–China negotiations for an investment agreement can be used as a platform for addressing differences and facilitating further investment, with a view to concluding an investment agreement between the EU and China that works for both sides as soon as feasible. The investment agreement will replace existing bilateral agreements between China and EU member states. The aim of such an agreement is to create a more open, transparent and secure environment for greater future flows of investment.

Market access is currently the most challenging issue in these negotiations. Potential Chinese investors in the EU perceive growing scrutiny from EU national regulators, on grounds of national security and unfair competition. Conversely, European companies perceive major limitations to access the Chinese market on grounds of domestic development strategy and protectionism of certain sectors. In pursuing the investment agreement, therefore, the objective should be to create fair, stable, transparent and predictable business climates in China and the EU, so that companies from both sides enjoy equal treatment regardless of their country of origin. This will require both the EU and China to update their respective strategies and institutional frameworks, including possibly the passage of new legislation, to ensure such business climates and to strengthen protection for intellectual property rights.

Some EU concerns could be partly addressed by Chinese companies adopting prevailing international principles of corporate governance. China would expect the EU to acknowledge that Chinese companies are starting from a different point and operating in a different economic system. Nevertheless, the Chinese government has stated that it is committed to opening up its markets further to foreign investment and letting the market play a decisive role in the allocation of resources. An important step towards reaching an agreement, therefore, would be for China to begin implementing the application of its 'negative list' on investment to its whole national territory rather than solely in the free trade zones (FTZs), after which, shorter, coordinated 'negative lists' for investment could be agreed between the EU and China.

Meanwhile, the EU–China investment agenda should focus more on opening up each other's service sector. An EU–China investment agreement has the potential to spur a new round of economic reform, including in the SOEs, and market liberalization in China.

2. Open negotiations on establishing an EU–China free trade agreement (FTA)

Such negotiations can be initiated upon the successful conclusion of the investment agreement between the EU and China. China's relative importance to the EU as a trade partner will continue to grow in the coming years, even as the EU's relative importance to China is likely to decline slightly (by 2020, the EU may no longer be China's largest trading partner, partly as a result of Brexit). This means that the extent to which China and the EU further open up their markets and improve trade and investment liberalization and facilitation with each other will be a crucial factor shaping EU–China economic relations to 2025.

As China's economy continues to develop and urbanize, leading to a shift to higher-quality consumption and higher value-added activities, expanding market access and coordinating regulation between the EU and China will become more important and potentially easier to achieve. Trade in services should be actively promoted in both directions. Healthcare products and services are good examples of areas that can benefit both sides. Driven by the changing demographics of China's ageing population and the capacity gap in healthcare provision between the EU and China, it should become a major area for market opening.

As an example of an FTA's potential impact, Chinese research estimates that an FTA in 2020 could increase the EU's exports to China by one-third over the five years to 2025, while China's exports to the EU would be 20 per cent higher. Although an FTA would help improve the EU–China trade balance, eliminating the EU's trade deficit with China will require additional joint efforts beyond an FTA.

In the meantime, the two sides should encourage pragmatic cooperation and market liberalization across a number of related areas, while conducting further research and engaging in dialogue on how an FTA could help deliver mutually beneficial economic development.

3. Use China's Belt and Road Initiative (BRI) as a platform for further expanding bilateral trade and economic cooperation

The BRI offers the opportunity for complementary benefits to the EU and China. The EU has the potential to become the western 'anchor' of the BRI, which aims to create new land and sea connections between the fast growing markets of East Asia and the mature, developed markets of Europe, enhancing trade between them as

well as markets along the planned rail and sea routes. Related Chinese investment, alongside the EU's 'Juncker Plan', can help address some EU infrastructure bottlenecks, especially in port and rail facilities in Central and Eastern Europe, and through new rail freight routes between China and Europe. The EU's global trade could increase by some 6 per cent as a result, once all related projects are completed, principally due to a reduction in transport costs. EU companies could use these new routes to increase the amounts of their exports to a growing Chinese consumer market, even as Chinese companies improve the price competitiveness of their exports in the other direction.

For their part, EU financial institutions can bring expertise in the long-term financial management of complex infrastructure investment projects, while European investment could help BRI projects meet the necessary global standards for environmental and other forms of sustainability. Moreover, new BRI-related investment, trade and industrial cooperation can help invigorate growth in the EU and its neighbourhood. The EU and China should ensure that these investments contribute to balanced, sustainable and inclusive development for both and for the world economy as a whole.

4. Deepen EU–China cooperation on energy security and climate change

The EU and China share many common objectives in relation to energy and climate policy. In 2016, the EU and China signed an energy cooperation roadmap, promoting bilateral cooperation in energy security, infrastructure building, and market transparency. Future objectives include strengthening bilateral cooperation in design, low-carbon energy systems, energy legislation and policy, standard setting, and pricing modes and governance mechanisms, especially in nuclear and renewable energy.

The EU and China have also reiterated their strong support for the 2015 Paris Agreement on climate change, after US President Donald Trump announced in June 2017 that the US would withdraw from the accord. In order to help sustain domestic and international progress towards the Paris goals, the EU and China could take a number of steps together, in accordance with the principle of common but differentiated responsibilities, as stated in the United Nations Framework Convention on Climate Change. These include pursuing their Intended Nationally Determined Contributions, securing financing for programmes in the least developed countries, and deepening their cooperation on data sharing and transparency in multilateral forums. Climate finance, including green development finance, should be another key area for deeper cooperation.

5. Focus on the opportunities offered by new breakthroughs in science, technology and innovation (STI)

Breakthroughs in STI will be key factors in shaping economic development in the EU, China and across the world in the coming years. They will also be necessary to manage global challenges such as climate change, energy efficiency and active and healthy ageing. The EU and China both have major initiatives under way to leverage these opportunities, and should facilitate cross-border collaboration as necessary.

What makes this a promising area for EU–China cooperation is that STI is a field driven less by questions of market access and more by the capacity of those engaged in innovation to create networks across borders. Companies involved in STI already link together research and development (R&D), collaboration with universities and production value chains across multiple locations. EU firms are estimated to conduct over 40 per cent

of their R&D overseas, and their investments in research and development centres in China make up a significant part of the Chinese innovation system. Similarly, Chinese enterprises are building more R&D, design and information centres in Europe.

Although Chinese STI expertise lags behind the EU in many manufacturing and service sectors, some Chinese companies are already world leaders in communications infrastructure and applications, and e-commerce. As China's domestic market grows in scale, its companies will increasingly work alongside EU companies and others in driving globally-networked innovation, potentially leap-frogging current technology in areas such as modern agriculture, advanced manufacturing, and services. The emergence of these sectors demonstrates the way in which opportunities for EU–China business-to-business collaboration continues to shift from traditional manufacturing to advanced manufacturing as well as new information technology, internet security, biopharmaceutical, renewable energy and 'new energy' automobile industries.

Still, more proactive efforts from both sides will be needed to secure 'win-win' cooperation. Chinese enterprises consider the current EU bans and restrictions on exports of high-technology products discriminatory and unfair. For their part, European businesses consider that their intellectual property is not sufficiently protected and that technology transfer tends to be uni-directional. Furthermore, they are increasingly concerned about Chinese government support for domestic high-technology sectors.

Both the EU and China will therefore need to promote specific opportunities for technical cooperation wherever possible. Concerns over cybersecurity will also need to be managed sensitively and consistently. However, growing Chinese focus on protecting intellectual property and working more closely with the EU in setting global standards for future technologies could help the two sides overcome current obstacles to cooperation. Ultimately, what European and Chinese companies build and design together will be as important as what they sell to each other.

Investing more in STI cooperation under a networked approach will depend to a great extent on easing the capacity for individuals to travel to and work in each other's markets. At a basic level, the growth of the Chinese middle class and levels of consumption makes it more likely that there will be significant expansion in the number of Chinese tourists and students in Europe. According to Chinese research, in 2015, consumption per capita of Chinese visitors to the EU reached €2,200, contributing 0.3 per cent to EU GDP and raising EU employment by 0.6 percentage points. All of the areas described here – from trade and investment to deepening people-to-people exchanges – would benefit greatly from targeted, reciprocal, multi-year and multiple-entry visas.

6. Support further EU–China cooperation in the financial sector

Increasing levels of EU–China trade and investment, driven in part by the increased presence of Chinese enterprises in the EU as they continue to 'go global', will require more financial support from institutions in the EU and China. The early involvement of EU member states in the Asian Infrastructure Investment Bank and Chinese involvement in the European Bank for Reconstruction and Development have shown that the EU and China are willing to deepen cooperation in multilateral financial institutions. The massive demand for infrastructure financing in Asia and under the BRI will offer new opportunities for financial cooperation, especially if the two sides work together to use these opportunities to champion green financing mechanisms and products.

The EU and Chinese economies are both dominated by bank financing and are experiencing a rapid expansion of their capital markets, though they are starting from very different initial conditions. Liberalizing the entry requirements for EU financial institutions into the Chinese market would enable them to support China's reform and development of its financial services industry, including helping to improve regulatory standards and technical financial oversight, thereby enhancing the allocative efficiency of capital in China and promoting stable and sustainable development. Similarly, more Chinese financial institutions should be encouraged to operate in the EU. In addition, enterprises of both the EU and China should be permitted as well as encouraged to list their shares and to issue debt in each other's capital markets, thus facilitating the development of direct finance.

Even though most of China's capital account categories are already either convertible, basically convertible, or partially convertible, the foreign currency assets of China's private sector are still relatively small, as are global investors' portfolio assets in China. However, a global portfolio rebalancing process will begin when Chinese capital controls are further relaxed, with portfolio investments flowing in both directions. There will then be new opportunities for the EU and China to deepen their financial cooperation to ensure a smooth, orderly and stable transition in the Chinese (including Hong Kong's) international capital and foreign exchange markets.

Working together, the EU and China could promote the use of the euro and the renminbi in global transactions. The internationalization of the renminbi is proceeding with a high level of involvement from EU financial institutions. In the longer term, when China's financial markets are sufficiently mature and open, there will be more opportunities for the EU and China to cooperate to maintain the integrity of global financial markets and to strengthen the global financial architecture.

7. Contribute to strengthening mechanisms of good global governance

Both the EU and China should continue to promote an open world economy and contribute to the improvement of the global economic order. Deepening EU–China economic ties will not only bring potential benefits to both the EU and China, but also go some way towards strengthening the global economy and more broadly enhancing global governance, given the importance of both economies in the world. However, the beneficial effects of working more closely together will depend on certain pre-conditions.

First, it should be recognized that EU–China cooperation should not disadvantage the US, given its paramount importance to both the EU and China as well as to the global economy. Finding ways to connect the US to aspects of EU–China regulatory, financial, research and development, and other cooperation mechanisms should be a goal in Beijing, Brussels and other European capitals.

Second, the benefits of a closer EU–China relationship are likely to be diminished if the EU27 and the United Kingdom are unable to agree a sensible Brexit that ensures a continued close economic relationship between them. All three economies have a mutual self-interest in seeing a constructive outcome from the Brexit negotiations between the EU27 and the UK.

Finally, bilateral coordination between the EU and China on issues relevant to global governance – from deeper trade relations and financial cooperation to climate change policies – must be leveraged through and contribute to the strengthening of the G20, the WTO, the UN and other appropriate multilateral bodies. This will ensure that this deeper bilateral cooperation can be of global benefit and be sustainable over time.

1. Introduction

With global uncertainties on the rise, it has become particularly important for the EU and China to find ways to deepen their bilateral economic cooperation. The EU and China, as the world's second and third largest economies, share a responsibility in upholding the rules-based, global free trade system and other forms of multilateral cooperation, especially on combating climate change. Starting from this premise, this report sets out the main conclusions of a research project between European and Chinese think-tanks, which addresses the prospects for the EU–China economic relationship through to 2025 (see Appendix A for background to the project). As the report lays out, the two sides have the opportunity to deepen their cooperation in areas such as trade and investment; infrastructure; energy, the environment and the Paris climate change agreement; science, technology, innovation and industrial cooperation; financial services; people-to-people exchanges; and global governance. In this way, the EU and China can help ensure that global development is stable, strong, balanced and sustainable.

Drivers for EU–China relations in a changing world

The EU and China have much in common. Their GDPs (€14.72 trillion and €9.75 trillion, respectively, in 2015) rank number two and number three in the world, behind the United States (€16.64 trillion). They are two of the most externally-integrated economies in the world, with annual international trade in goods and services of €15 trillion and €4.75 trillion in 2015, respectively. Today, China is significantly more open than either Japan or South Korea was at a similar stage of development. The EU's total trade with partners outside of the EU was €5 trillion in 2015, slightly higher than China's international trade. Their annual bilateral trade in goods and services stood at €580 billion in 2015, with each being the other's largest source of imports and second largest export destination. Both EU and Chinese leaders believe that effective rules-based multilateralism should form the core of global governance. The two are not competitors in terms of global security.

At the same time, the global economy is in flux. In particular, the US is stepping back from playing its traditional multilateral leadership role in the global economy and in international trade.[1]

It is all the more important, therefore, that the EU and China should consider whether deepening their economic relationship could bring mutual benefits in terms of driving economic growth, creating jobs and improving levels of social welfare. As their leaders have recently stated,[2] the EU and China can work together to facilitate openness and cooperation.

Nevertheless, both long-standing and new obstacles stand in the way of this ambition. In recent years, many EU business leaders have come to perceive Chinese companies as sources of unfair competition, at the same time as returns on European investments in China are being squeezed by emerging Chinese competitors. State ownership remains a salient feature of the Chinese economy, which creates concerns for the EU about market access.[3] For its part, the Chinese government believes that the EU discriminates against China's state-owned enterprises (SOEs) even as they are becoming increasingly

[1] Demertzis, M., Sapir, A. and Wolff, G. (2017), 'Europe in a New World Order', Bruegel policy brief, http://bruegel.org/wp-content/uploads/2017/02/Bruegel_Policy_Brief-2017_02-170217_final.pdf (accessed on 24 Jul. 2017).
[2] European External Action Service (2017), 'Remarks by the High Representative Mogherini following the 7th EU–China Strategic Dialogue', 19 April 2017, https://eeas.europa.eu/headquarters/headquarters-homepage/24821/remarks-high-representative-mogherini-following-7th-eu-china-strategic-dialogue_en (accessed 24 Jul. 2017).
[3] European Union Chamber of Commerce (2017), 'European Business in China: Business Confidence Survey', 31 May 2017, http://www.europeanchamber.com.cn/en/publications-archive/516/Business_Confidence_Survey_2017 (accessed 24 Jul. 2017).

corporate in their structure and market oriented through reforms. China's economic model is unlikely to converge with that of Europe in the foreseeable future.

Moreover, in the wake of the financial crisis and an extended period of economic austerity in a majority of European states, EU governments have less political support to argue for trade deals that may be seen as causing further near-term disruption in specific sectors of national economies. Instead, they are confronted with populist sentiments and political parties, which argue that globalization lies at the root of the current social stresses and insecurity and the growing economic inequality. Furthermore, while the EU's social welfare model is better developed than that of the US, the inequality debate has heated up in Europe also and tends to revolve narrowly around one factor, trade, while ignoring the impacts of other structural factors, such as demographic ageing, technological advances, industrial automation and the still fragmented EU markets in services.

The impact of technology and innovation is likely to intensify disruption to existing business models as well as provide new economic opportunities for the EU and China

Faced with the UK's decision in June 2016 to leave the EU ('Brexit'),[4] EU leaders will also have to spend time and resources over the next two years agreeing how best to limit the negative repercussions of the UK decision rather than reflecting on the complex challenges of negotiating new economic agreements with China and other trading partners. There will also be greater focus on eurozone governance and other forms of EU integration and reform now that the UK is stepping out of the EU.[5]

For its part, China is facing many challenges in its complex transition towards a new economic model that emphasizes coordinated development, further opening up, innovation, inclusive growth and green development. It will be a difficult balancing act to push through 'supply-side structural reform' – including as regards the SOEs – in order to reduce excess capacity and promote economic efficiency, while maintaining domestic demand to ensure steady and healthy economic growth.[6] China's economic structure has to be rationalized so as to enable a transition from an economy driven by exports and investment to a consumption-driven economy. Rapid improvements in domestic financial markets, regulatory standards, and the delivery of social welfare services are required, while systemic risks have to be effectively managed. Undertaking market opening negotiations in this context could raise additional challenges alongside opportunities for longer-term development and competitiveness.

The Chinese leadership must also contend with an increasingly complex regional context, in which relations with neighbours as well as the US will require constant

[4] This report weaves in discussion of Brexit and the UK's contribution to post-Brexit EU–China relations where appropriate. For more detailed analysis, see Summers, T. (2017), *Brexit: Implications for EU–China relations*, Research Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/sites/files/chathamhouse/publications/research/2017-05-11-brexit-eu-china-summers-final.pdf (accessed 24 Jul. 2017).
[5] See European Commission (2017), *White paper on the future of Europe: reflections and scenarios for the EU27 by 2025*, Brussels: European Commission, https://europa.eu/european-union/sites/europaeu/files/whitepaper_en.pdf (accessed 24 Jul. 2017); For an assessment of these structural shifts in the Asia-Pacific region, see Wickett, X., Nilsson-Wright, J. and Summers, T. (2015), *The Asia-Pacific Power Balance: Beyond the US–China Narrative*, Research Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/publication/asia-pacific-power-balance-beyond-us-china-narrative (accessed 24 Jul. 2017).
[6] According to the *People's Daily*, the goals of 'supply-side structural reform' are to improve the quality of supply, with further reform to promote structural adjustment and reduce distortion of resource allocation, expand the effective supply in order to improve the adaptability and flexibility of the structure of supply to meet changes in demand, and improve the total factor productivity (TFP), better meeting the needs of the people and sustained economic social development (see *People's Daily* (2016), 七问供给侧结构性改革——权威人士谈当前经济怎么看怎么干 [Seven questions on supply-side structural reform: authoritative personage discusses how to view and deal with the current economic situation], 4 January 2016, http://politics.people.com.cn/n1/2016/0104/c1001-28006577-2.html (accessed 28 Jul. 2017). In 2017, this means that Chinese government would give priority to improving supply-side structure through streamlining administration, reducing taxes, further expanding market access, and encouraging innovation in order to keep micro entities energized, reduce ineffective supply while expanding effective supply and better adapting to and guiding demand. See Li, K. (2017), 'Report on the work of the government', available in English translation at http://www.china.org.cn/china/NPC_CPPCC_2017/2017-03/16/content_40465441.htm (accessed 24 Jul. 2017).

attention. And in Europe, potential Chinese investors face growing scrutiny from EU national regulators on the grounds of national security as well as state subsidies.

In spite of these challenges, the EU and Chinese economies will remain inextricably linked in the future, not least because of their size and their current levels of economic interdependence. Given this fact, it is incumbent upon governments and businesses on both sides to find ways to overcome current obstacles and to design realistic and pragmatic ways to build on their existing relations. In so doing, not only will each side be better placed to take advantage of its comparative economic strengths, but they will also have a chance to play a role in improving the economic prospects of the other, to both sides' mutual advantage and to the benefit of the global economy.

Structural shifts: the global context

Over the past 25 years, global shifts in relative political and economic influence, including the rise of China, have accompanied a period of intensified globalization. This change has been facilitated by multilateral trade agreements and driven by established multinational companies incorporating developing countries into the global economy. During this process, China's economy and its GDP per capita have grown much more rapidly than its global peers. Since the financial crisis, however, global growth has slowed significantly, and there has been a growing debate over the future of globalization. Some argue that the nature of globalization is changing: from the globalization of production – with high levels of trade – to the globalization of consumption, knowledge and innovation,[7] a process in which non-Western economies and companies can play a more proactive role. Others see the beginning of a retreat into economic nationalism amid fundamental threats to the liberal order and economic interdependence from protectionist instincts and populist politics in both developed and emerging economies.[8] These developments raise new challenges for international trade and investment, as well as global economic governance, and will have a direct bearing on the future of the economic relationship between the EU and China.

Technological and demographic trends add to the flux in the global economy. The impact of technology and innovation is likely to intensify disruption to existing business models as well as provide new economic opportunities. One consequence is more diverse innovation, with the integration of China and other emerging world economies into the globalization of innovation and adding to the stock of high-quality human capital, which has been concentrated in recent decades in the developed world. Demographic trends will further amplify these shifts, with ageing in much of the developed world being counterbalanced by the emergence of a younger middle-income group in much of the developing world, including China, which, although its population is ageing, continues to urbanize, raise its levels of GDP per capita, and consume more.

The EU and China are emblematic of global shifts in relative economic weight. Measured at nominal exchange rates, China accounted for 14.9 per cent of global GDP in 2015, compared to 22 per cent for the EU and 24 per cent for the US (without the UK, the EU's proportion would have been 18 per cent).[9] However, these proportions continue to converge, given the sustained rapid economic growth in China

[7] Baldwin, R. (2017), *The Great Convergence: Information Technology and the New Globalization*, Cambridge: Harvard University Press.
[8] Niblett, R. (2017), 'Liberalism in Retreat: The Demise of a Dream', *Foreign Affairs*, January/February 2017, pp. 17–24, https://www.foreignaffairs.com/articles/2016-12-12/liberalism-retreat (accessed 24 Jul. 2017).
[9] Calculated from World Bank data on global GDP for 2015, available at World Bank (2017), GDP (current dollar), http://data.worldbank.org/indicator/NY.GDP.MKTP.CD (accessed 6 Sep. 2017).

and slower growth in Europe. Several years after the UK's planned exit from the EU, China's economy will surpass that of the EU27 in aggregate terms. By 2025, it could be around 10 per cent larger (without Brexit, the EU's economy would still be larger than China's in 2025).[10] But the EU will continue to have a significantly higher GDP per capita than China in the coming decades.

In trade and investment, both the EU and China are significant global players. China is the biggest exporter of goods, having surpassed the EU in 2014.[11] The EU is the world's second biggest importer of goods, behind the US. In services, the EU is the world leader for both exports and imports, well ahead of the US, with China still a distant third. The structure of trade in goods reflects the different industrial production profiles of the EU and China. The industrial sector accounted for 43 per cent of GDP in China in 2014, compared to 24 per cent in the EU. As a result, China has accumulated large current account surpluses in the last 20 years, while the EU records significant variation among its member states, with Germany running a current account surplus of 8.3 per cent of GDP in 2016 and the UK a deficit of 4.4 per cent.[12]

In terms of foreign direct investment (FDI), the EU holds the largest positive stock at $7.7 trillion (1990–2016), followed by the US at $6.4 trillion – though with the UK's stock at $1.2 trillion, after Brexit the EU27 and US stocks will be of similar magnitude, all other things being equal.[13] China's stock of inward FDI (about $1.8 trillion) is still larger than its stock of outward FDI (about $1.2 trillion), though this gap is narrowing: in 2016 China's outward FDI flows reached $170 billion, compared to inward FDI of $126 billion.[14] However, China's FDI flows now match or exceed those of the EU.

Prospects for the EU and China to 2025

Both the EU and China face serious economic challenges, not least in continuing to digest the aftermath of the 2008 global financial crisis, as well as dealing with a more isolationist and protectionist US. Their economies feature a larger stock of debt and weaker financial markets than before the crisis. For China, this is partly the result of maintaining high levels of economic growth since the crisis, achieved by a large fiscal and credit stimulus, with corporate sector debt now around 165 per cent of GDP.[15] The crisis came in the early stages of the country's economic transformation away from the reliance on investment and exports towards greater consumption and services. Structural reforms are intended to play a key role in this process, and a reform agenda to 2020 was set out in November 2013 at the third plenary meeting of the 18th Central Committee of the Communist Party of China. However, there were debates over

[10] Projections based on calculations by CCIEE. See Appendix C for data. In 2015 the UK share of the EU economy was 17.5 per cent, but since the Brexit vote this has declined.
[11] Eurostat, International trade in goods, http://ec.europa.eu/eurostat/web/international-trade-in-goods/data/database (accessed 16 Aug. 2017).
[12] World Bank (2017), Current account balance (percentage of GDP), http://data.worldbank.org/indicator/BN.CAB.XOKA.GD.ZS?locations=DE-GB (24 Jul. 2017).
[13] UNCTAD (2017), Annex table 03. FDI inward stock, by region and economy, 1990–2016, http://unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx (24 Jul. 2017).
[14] National Development and Reform Commission (2017), 'Report on the Implementation of the 2016 Plan for National Economic and Social Development and on the 2017 Draft Plan for National Economic and Social Development', http://news.xinhuanet.com/english/china/2017-03/17/c_136137416.htm (accessed 24 Jul. 2017). Data on inward and outward investment taken from p. 43 of English version with tables, http://online.wsj.com/public/resources/documents/NPC2017_NDRC_English.pdf (accessed 24 Jul. 2017).
[15] Bank for International Settlements data, 6 June 2017, http://www.bis.org/statistics/totcredit.htm (accessed 30 Jul. 2017).

whether the reform process had been moving fast enough.[16] It is likely that the pace of China's reform and opening up will quicken following the 19th National Congress of the Chinese Communist Party, scheduled for late 2017, which should open up new opportunities for EU–China cooperation.

There are two likely broad scenarios for China's economy in 2025. First, supply-side structural reforms progress smoothly and structural imbalances are eased, with new industries and models of business operation developing rapidly. In this case, China's real annual GDP growth rate could remain around 6.5 per cent on average in 2016–20 and about 5.5 per cent in 2021–25. Alternatively, continued structural contradictions in the economy could lead the growth rate to fall below these levels, exacerbating problems of overcapacity in certain industries and leading to weaker corporate performance and a greater burden of debt service.

In either scenario, there is likely to be variation across China's economy. In some regions and sectors, transition to stronger roles for consumption and services will constitute an important engine for growth, and innovation will allow China to move up the value-added chain. Urbanization will continue, and the proportion of the population resident in urban areas is projected to approach 65 per cent by 2025. With a continued rise in per capita income, the Chinese demand for quality products and services will continue to grow. Direct investment flows between China and the EU should also continue to rise given the increase in new business opportunities this will bring. The Chinese government has realized the inevitability and importance of these developments and is in the process of putting in the right policies to facilitate them. Nevertheless, many EU businesses would like to see China step up the pace of this liberalization process.

For the EU, an ageing population and slow productivity expansion will keep potential economic growth at relatively low levels. However, technological capability in key sectors of the new economy should allow the EU to maintain an edge at the higher end of the global production chain. A key variable will be the impact of what looks likely to be a 'hard' Brexit. In this report it is assumed that the UK will exit the single market and that it is most likely to leave the customs union. Under these circumstances, it is difficult to predict what sort of agreement the UK and the EU will reach to manage their economic ties, though the base assumption of this report is that a reasonably open agreement will be reached. After the UK's withdrawal, the EU will be a somewhat smaller economic bloc (some 85 per cent of today's GDP). But Brexit may open up new possibilities for EU integration, which have previously been resisted by the UK.

There is much public debate about the less likely 'tail' scenarios that could occur in the run up to 2025, though we consider these improbable. For China, this could include the economy facing a 'hard landing', or the risks in the financial system getting out of hand. This would clearly weaken China as a partner for the EU and, given China's global economic importance, would be bad for the entire global economy. A remote tail scenario for the EU could see it become more fragmented, as member states other than the UK look to recalibrate their relationship with it (or even leave the union). A substantially weakened EU would be a less effective and attractive partner for China, particularly given wider structural shifts in global economic influence.

[16] For sceptical views see both the EU's latest policy paper on China and recent reports of the European Chamber of Commerce in China. European Commission (2016), Joint communication to the European Parliament and the Council: Elements for a new EU strategy on China, 22 June 2016, http://eeas.europa.eu/china/docs/joint_communication_to_the_european_parliament_and_the_council_-_elements_for_a_new_eu_strategy_on_china.pdf (accessed 24 Jul. 2017); and European Chamber of Commerce (2017), *The Business Confidence Survey 2017*, http://www.europeanchamber.com.cn/en/publications-archive/516/Business_Confidence_Survey_2017 (accessed 24 Jul. 2017). For the argument that reforms are being carefully sequenced see Stent, J. (2017), *China's Banking Transformation: The Untold Story*, Oxford: OUP.

EU–China relations: from 1975 to 2015

Formal relations between the then European Community and the People's Republic of China began in 1975. Relations have since broadened from the early focus on trade, investment and technology exchange to encompass a much wider range of issues, from energy and cybersecurity to cultural and educational exchanges. Since 1998 EU–China summits have been held almost every year.[17] In 2003, the two sides launched a comprehensive strategic partnership that evolved into the 2013 'EU–China 2020 Strategic Agenda for Cooperation' across four main areas: peace, prosperity, sustainable development and people-to-people exchanges.[18] In March 2014, Xi Jinping became the first Chinese president to visit the EU headquarters in Brussels and called for the relationship to consist of four partnerships, for peace, growth, reform and civilization.[19]

There is much overlap between the EU and China in terms of strategic outlook; this includes the desire for 'multilateralism' to be central to global governance. China has long seen the EU as an important 'pole' in an emerging multipolar world order.[20] EU member states were early supporters of China's push to create the Asian Infrastructure Investment Bank (AIIB) in 2015, and, in 2016, China became a shareholder of the European Bank of Reconstruction and Development. Both see globalization as broadly beneficial, but are also looking for new ways to manage its effects.[21] In June 2017, China and the EU agreed to reinforce their commitment to combating climate change after the US announced it would pull out of the Paris Agreement.[22]

However, the two sides do not always share the same strategic perspective. First, the US plays an important role in EU–China relations, as was made clear in the EU's debate in the early 2000s over lifting the EU's arms embargo on China and Chinese involvement in the EU's Galileo satellite programme.[23] Moreover, the EU–China relationship is not one between two equivalent actors. China is a unitary state, though a complex and diverse one, while the EU is a supranational regional actor constituted by European institutions and member states, each of which has their own bilateral relations with and approaches to China.[24] Achieving the sort of 'strategic partnership' referred to by leaders from China and the EU will require further effort from both sides.[25]

Trade has been the core of EU–China relations. It has grown to the point where the EU28 together are China's largest trading partner and China is the EU's second largest,

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[17] See Appendix B, Figure 11.
[18] 'EU-China 2020 Strategic Agenda for Cooperation' (2013), http://eeas.europa.eu/archives/docs/china/docs/eu-china_2020_strategic_agenda_en.pdf (accessed 24 Jul. 2017). For background, see also the European External Action Service (2017), 'EU-China relations factsheet', https://eeas.europa.eu/sites/eeas/files/eu-china_factsheet_0.pdf (accessed 24 Jul. 2017).
[19] Ministry of Foreign Affairs of the People's Republic of China (2014), 'Xi Jinping holds talks with President Herman Van Rompuy of European Council', 31 March 2014, http://www.fmprc.gov.cn/mfa_eng/topics_665678/xjpzxcxdsjhaqhfbfwhlfgdgblshlhgjkezzzbomzb_666590/t1143124.shtml (accessed 24 Jul. 2017).
[20] Qin, Y. (2013), 'Power Shift, Governance Deficit and a Sustainable Global Order', *Economic and Political Studies,* 1(1): pp. 89–106.
[21] Finding new ways to manage the challenges of globalization was a theme of Xi Jinping's speech at Davos in January 2017, available at Xi, J. (2017), 'President Xi's speech to Davos in full', World Economic Forum, 17 January 2017, https://www.weforum.org/agenda/2017/01/full-text-of-xi-jinping-keynote-at-the-world-economic-forum (accessed 24 Jul. 2017). For EU thinking see European Commission (2017), 'Reflection paper on harnessing globalisation', 10 May 2017, https://ec.europa.eu/commission/publications/reflection-paper-harnessing-globalisation_en (accessed 24 Jul. 2017).
[22] Financial Times (2017), 'China and EU offer sharp contrast with US on climate change', *Financial Times*, 1 June 2017, https://www.ft.com/content/06ccfc32-45d4-11e7-8519-9f94ee97d996 (accessed 7 Jul. 2017).
[23] Casarini, N. (2009), *Remaking global order: the evolution of Europe-China relations and its implications for East Asia and the United States*, Oxford: OUP.
[24] For discussion of this point see Feng, Z. (2007), 'Promoting the deeper development of China-EU relations', in Kerr, D. and Liu, F. (eds.) (2007), *The International Politics of EU–China Relations*, Oxford: OUP.
[25] Maher, R. (2016), 'The elusive EU–China strategic partnership', *International Affairs,* 92(4): pp. 959–976. See also a number of chapters in Wang, J. and Song, W. (eds.) (2016), *China, the European Union and the International Politics of Global Governance*, London, NY: Palgrave Macmillan.

Trade has been the core of EU–China relations. It has grown to the point where the EU28 together are China's largest trading partner

after the US (see Chapter 2). Since the 1980s, cumulative FDI from the EU to China has created stocks of €168 billion by 2015,[26] while over the last few years, flows of Chinese investment into the EU have increased, with transactions worth €35 billion in 2016, according to one data set (see Chapter 3). Financial cooperation has also grown from a low base (Chapter 7).[27] With renminbi offshore centres established in Europe (especially London), and a considerable proportion of trade between China and some EU countries now settled in renminbi. Interactions have also been growing across energy and climate issues (Chapter 5), science, technology and innovation (Chapter 6), and people-to-people ties (Chapter 8). Recent EU and Chinese initiatives could form a strong basis for strategic cooperation in infrastructure investment, stimulated especially by China's Belt and Road Initiative (Chapter 4).

In the past, there has been a strong general complementarity in economic and commercial relations between the two sides, despite occasional disputes over trade and investment and over specific issues, such as steel and solar panels.[28] But this period may already be giving way to a more complex economic picture, which features growing competition in some areas alongside complementarity in others.[29] This added complexity is likely to characterize relationships between the EU and China to 2025.

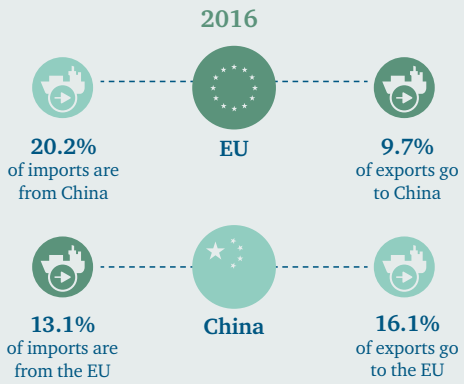
[26] European Commission data, 'EU-China: Foreign direct investment', http://ec.europa.eu/trade/policy/countries-and-regions/countries/china/ (accessed 24 Jul. 2017).
[27] For example, in March 2017, 36.3 per cent of global renminbi foreign exchange transactions (excluding China) were conducted with the UK and 7.3 per cent were conducted with France. See SWIFT RMB Tracker, April 2017, https://www.swift.com/our-solutions/compliance-and-shared-services/business-intelligence/renminbi/rmb-tracker/document-centre (accessed 24 Jul. 2017).
[28] Casarini, N. (2017), 'A New Era for EU-China Relations?', *Foreign Affairs*, 6 June 2017, https://www.foreignaffairs.com/articles/china/2017-06-06/new-era-eu-china-relations (accessed 24 Jul. 2017).
[29] Casarini (2009), *Remaking global order*, p. 62 has a brief summary of this shift. Innovation competition may also be an area where views diverge, see Kalcik, R. (2017), 'Is China's innovation strategy a threat?', Bruegel blog post, 3 April 2017, http://bruegel.org/2017/04/19927/ (accessed 24 Jul. 2017).

2. Trade Relations

Trade relations to date

Trade is the most developed area of interactions between the EU and China. Trade in goods expanded particularly rapidly following China's accession to the WTO in 2001, to reach €515 billion in 2016, compared to €113 billion in 2001.[30] The EU and China are each other's largest source of imports: in 2016, China accounted for 20.2 per cent of EU imports (the US for 14.5 per cent), while in 2016 the EU accounted for 13.1 per cent of Chinese imports. The two partners are each other's second-largest export destinations: in 2016, China was the destination for 9.7 per cent of EU exports (the US accounted for 20.8 per cent), while in 2016 the EU took 16.1 per cent of Chinese exports (the US accounted for 18.2 per cent).

The EU and China are each other's largest source of imports and one another's second largest export destinations.



By contrast, bilateral EU–China trade in services is only about one-eighth of the trade in goods.[31] According to EU statistics, in 2016 the EU exported €38 billion of services to China, while China exported €27 billion to the EU. The importance of services relative to goods trade is very different for the two partners: bilaterally, EU exports to China of services are equivalent to 22 per cent of its goods exports, but that proportion is only 8 per cent for Chinese exports to the EU.[32] Chinese imports of services grew at an average annual rate of more than 25 per cent between 2010 and 2015, and the EU's trade surplus in services with China has been growing at an average annual rate of 37 per cent since 2010, reaching €11 billion in 2015. As such, there exists substantial potential for China and the EU to develop services trade in the future, dependent in particular on the extent of China's market opening to foreign competition.

Trade in goods consists mainly of manufactured products, which accounted for 84 per cent of EU exports to China and 97 per cent of Chinese exports to the EU in 2016 (agricultural products and raw materials make up the remainder of goods exports). For both parties, machinery and transport equipment represent over half of total exports of goods, though the product composition within this category differs. For China the main items were office and telecommunications equipment

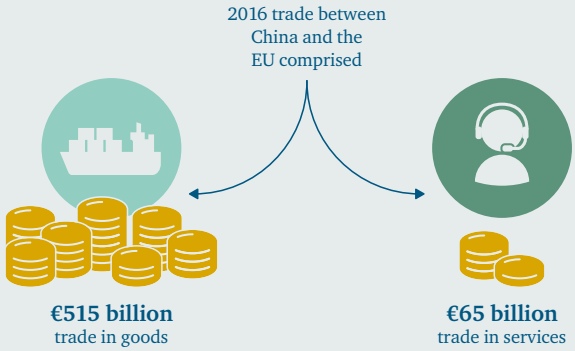
[30] Data in this section on the EU's trade in goods with China for 2016 are taken from EU Directorate-General for Trade (2017), 'European Union, Trade in goods with China', http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113366.pdf (accessed 24 Jul. 2017).
[31] It is also 6.5 times lower than bilateral EU–US trade in services.
[32] Provisional data of Eurostat, International trade in services, http://ec.europa.eu/eurostat/web/international-trade-in-services/data/database (accessed 6 Sep. 2017).

There exists substantial potential for China and the EU to develop services trade in the future, dependent in particular on the extent of China's market opening to foreign competition

(30 per cent of the total of goods exports) and electrical machinery (10 per cent), while for the EU transport equipment (25 per cent of total exports), non-electrical machinery (15 per cent) and chemicals (13 per cent) were the main export items.[33] This trade reflects the relative capital or labour-intensities, with most Chinese exports to the EU at the lower to middle value-added end of the spectrum. As Chinese imports of higher-end goods from the EU grow, reflecting greater Chinese consumption, and Chinese exports move up the value chain, the structure of trade between the EU and China will continue to evolve.

Over the period from 2005 to 2015, EU statistics show that China's share of the EU's total trade rose from 9.5 per cent to 14.8 per cent. However, the proportion of China's trade volume accounted for by the EU fell from 15.3 per cent to 14.3 per cent over the same period, showing that the EU's relative importance to China as a trade partner has declined slightly.[34] The reduction in the size of the EU economy after Brexit will further diminish the EU's relative importance in China's overall trade. By 2020 the 10 countries of the Association of Southeast Asian Nations (ASEAN), rather than the post-Brexit EU27, could become China's largest trading partner.[35]

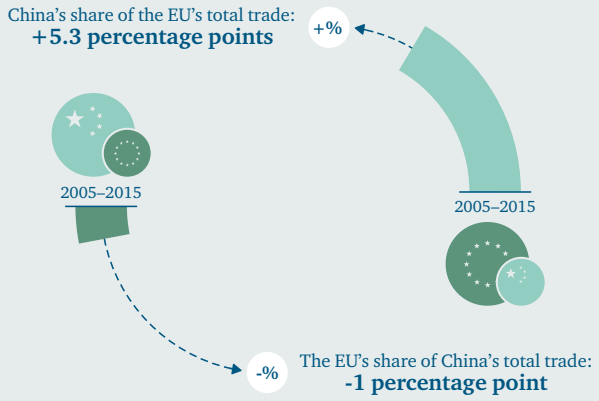
Trade is central to the EU–China relationship but while trade in goods is well developed, trade in services lags behind.



The EU has a substantial trade deficit in goods with China, though its relative size will reduce after Brexit given the UK's disproportionate contribution to the deficit.[36] According to EU statistics, the EU's annual trade deficit increased from €109 billion to €180 billion from 2005 to 2015, falling slightly to €175 billion in 2016; in 2015, China exported €350 billion worth of goods to the EU against €170 billion in imports. Chinese statistics showed a smaller surplus, but one which still increased from $70 billion to $147 billion from 2005 to 2015, falling slightly to $131 billion (€110 billion)[37] in 2016. The surplus partly reflects the structure of trade and China's position in the global economy as a major assembler of goods, to which relatively lower value is added, while EU companies provide higher value-added branding, marketing and other links. This pattern is now gradually changing as the value-added content of China's exports continues to increase.

[33] All data for 2016, from EU Directorate-General for Trade (2017), 'European Union, Trade in goods with China'.
[34] Data from Zhang, Z. and Li, D. (2017), 'Analysis on the Influence of Building the EU–China FTA', paper prepared for a roundtable on *EU–China Economic Relations: Looking to 2025* at Chatham House, 9–10 February 2017.
[35] Summers (2017), 'Brexit', p. 7.
[36] For further discussion of the impact of Brexit, see Summers (2017), 'Brexit'.
[37] Using an exchange rate of 1 USD = 0.8468 EUR, http://www.reuters.com/finance/currencies.

From 2005 to 2015, China's share of the EU's total trade rose, while the EU's proportion of China's trade volume fell.



This point is borne out by value-added analysis of trade flows.[38] From this perspective, China's trade surplus vis-à-vis the EU would be substantially lower. For example, an analysis carried out by the Chinese Academy of Sciences[39] estimated that the average domestic value added of each $1,000 of Chinese exports to the EU was about $679, while the domestic value added of each $1,000 of EU exports to China was about $791. The fact that about 35 per cent of China's exports to the EU were processing and assembly trade is a major contributory factor to this difference.

Using these estimates, and taking into account the difference between FOB (free on board) and CIF (cost, insurance and freight) values, and the effect of re-exports through Hong Kong, this analysis estimated that China's trade surplus with the EU in 2016 was $90.1 billion in value-added terms instead of the unadjusted figure of $131 billion. This $90.1 billion surplus would fall further to $53.4 billion if services trade is also taken into account. Using a value-added approach to trade, this study further estimated that Chinese exports to the EU helped to generate a total of 11.49 million person-years of employment in 2016 for China while the employment generated in the EU from its exports to China was 2.64 million person-years. On the other hand, a study by Bruegel[40] points to a statistically significant reduction in European manufacturing employment as a consequence of Chinese imports, although the estimated 5 per cent reduction over the period 2001–07 in EU employment due to China's imports was offset to the extent of roughly one-third by the employment generated by European exports to China.

Importantly, the value added of China's exports has grown noticeably since 2007 due to the upgrading of its industry after the 2008 financial crisis and to a declining share of the global processing trade while general trade, which uses more domestic inputs, increased. Figures 1 and 2 depict the trend for the ratio of value-added trade surplus to gross trade surplus.

[38] See also Premier Li Keqiang's recent comments on the trade deficit, Xinhua (2017), 'Full text of Chinese premier Li's speech at the 12th China-EU Business Summit(2)', 3 June 2017, http://news.xinhuanet.com/english/2017-06/03/c_136337153.htm (accessed 24 Jul. 2017).
[39] Unpublished paper by Chen Xikang, Chinese Academy of Sciences.
[40] García-Herrero, A. and Xu, J. (forthcoming), 'Europe's Trade with China: Impact on Manufacturing Employment', Bruegel.

Chinese exports to the EU have a greater impact on domestic employment than exports in the other direction.

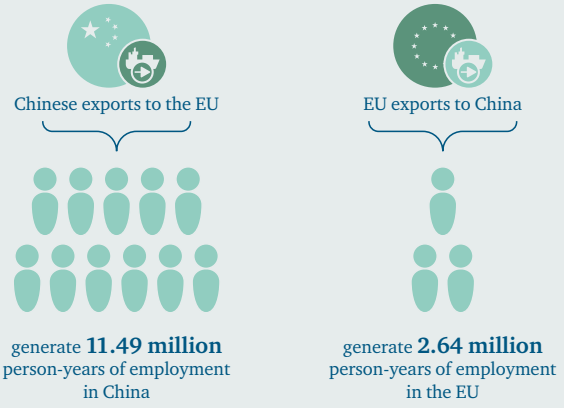
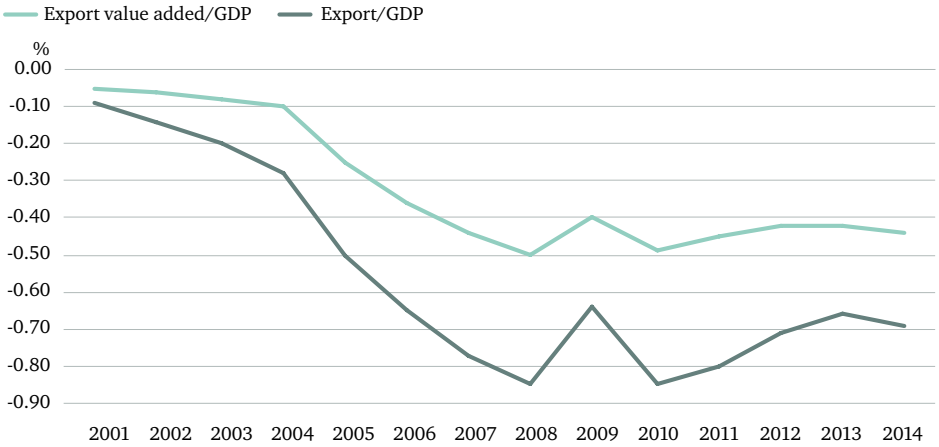


Figure 1: China's bilateral surplus with EU in gross and value-added terms



Source: García-Herrero, A. and Xu, J., 'How is China's export sophistication affecting its trade surplus with Europe?', unpublished Bruegel research.

Figure 2: Value-added trade surplus

Source: García-Herrero, A. and Xu, J., 'How is China's export sophistication affecting its trade surplus with Europe?', unpublished Bruegel research.

Looking forward to 2025, several factors will drive the change in the nature of EU–China trade. Firstly, services trade is likely to grow faster than trade in goods, especially if China opens up further to the import of services. At present, the services sector accounts for 70 per cent of FDI into China. Secondly, investment-related imports and exports, as well as cross-border e-commerce trade, will grow substantially. In addition, China's outward FDI is expected to reach $750 billion, and it aims to attract $600 billion in FDI over the next five years; this will drive trade development. Finally, trade may be boosted by EU–China cooperation on procurement capacity and connectivity under the Belt and Road Initiative (BRI).

Bilateral and multilateral frameworks for EU–China trade

EU–China trade in goods and services takes place within the framework of multilaterally agreed WTO rules and commitments, but also against the background of a growing number of free trade agreements (FTAs) being negotiated and concluded by both the EU and China, whose FTA strategies are designed to promote trade with numerous partners. At the moment, however, there are no formal bilateral trade arrangements between the EU and China, though trade is a key issue on the agenda of regular summits and working groups, and in particular at the annual High Level Economic and Trade Dialogue, which has been meeting since 2008. For example, at the meeting in April 2016 of the Economic and Trade Working Group, four technical working groups focused on market access issues in the areas of trade in goods, services, technical barriers to trade and food safety, and animal and plant health issues were set up.

Growth in EU–China trade has suffered a significant slowdown since 2011, in line with a global slowdown in trade growth

One of the main bones of contention between the EU and China has been over dumping and anti-dumping, where China has been a major focus of EU measures, and where China has also brought anti-dumping cases against individual European companies.[41] The question of whether the EU would grant China 'market economy status' was also a major item on the agenda from 2014 to late 2016.[42] The Chinese government stressed that Article 15 of the Protocol on China's Accession to the WTO should be seen as a 'sunset clause'[43] and argued that, under Article 15(d) of its accession protocol to the WTO, the methodology of using third country prices to establish dumping by China should cease after December 2016. But in the context of divergent views within the EU, China has since taken the issue to the WTO's dispute resolution mechanism.[44] At the 19th EU–China leaders' meeting in Brussels, the EU also confirmed that it would abide by WTO rules.[45]

Influencing current discussions on the future framework of EU–China economic relations is the fact that growth in EU–China trade has suffered a significant slowdown since 2011, in line with a global slowdown in trade growth. Total EU–China trade grew

[41] Out of 108 trade defence measures in place in the EU as of June 2016, 63 affect imports originating in China; European External Action Service (2017), 'EU-China relations factsheet'. By comparison, the US had a total of 265 definitive anti-dumping measures in force, of which 97 concerned China.
[42] Article 15 of China's Protocol of Accession to the WTO allowed WTO members to consider China as a non-market economy (NME), and therefore to apply the so-called surrogate or analogue country method to establish dumping by Chinese exporters, relying on price or production data from third countries rather than Chinese data.
[43] The State Council of the People's Republic of China (2017), 'China-EU relations will be further improved', 3 June 2017, http://english.gov.cn/premier/news/2017/06/03/content_281475674661502.htm (accessed 24 Jul. 2017).
[44] This process may take years to conclude. See World Trade Organization (2017), 'DS516: European Union – Measures related to price comparison methodologies', https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds516_e.htm (accessed 24 Jul. 2017). For general comment on China's approach to the WTO, see Moynihan, H. (2017), 'China's Evolving Approach to International Dispute Settlement', Briefing, London: Royal Institute of International Affairs, https://www.chathamhouse.org/publication/chinas-evolving-approach-international-dispute-settlement (accessed 24 Jul. 2017).
[45] The State Council (2017), 'List of outcomes of the 19th China-EU summit', 4 June 2017, http://english.gov.cn/premier/news/2017/06/04/content_281475676073214.htm (accessed 24 Jul. 2017).

Brexit also potentially complicates the projections of the impact of an EU–China FTA, depending on the nature and timing of any agreement reached between the UK and the EU

by an average of 14.4 per cent per annum from 2001–11 (notwithstanding the disruptions to trade caused by the global financial crisis of 2007–08), but growth fell to 3.6 per cent per annum during 2011–16. The European sovereign debt crisis contributed to this significant slowdown, but the generic issues leading to a global trade slowdown are also relevant. Many analyses have shown that a decline in the pace of trade liberalization globally, the rise of protectionist sentiments in many parts of the world, and weak investment in many economies are some of the major contributing factors.[46] Given the recovery of the EU economy and the revival of investment, EU–China trade growth has picked up, in line with the global recovery in trade.

The main focus of EU–China economic negotiations currently is the EU–China investment agreement, which has been under negotiation since 2013 (see Chapter 3). The EU–China 2020 Strategic Agenda for Cooperation also identified 'broader ambitions including, once the conditions are right, [commitment] towards a deep and comprehensive FTA'.[47] The EU's position has been that the two sides should first conclude their investment agreement before negotiating an FTA.

Brexit also potentially complicates the projections of the impact of an EU–China FTA, depending on the nature and timing of any agreement reached between the UK and the EU. Although there are some proponents of an early UK–China FTA,[48] it would not be in the UK's economic interests to reach an agreement with China before a deal with the EU27.[49]

EU–China FTA and projections for trade

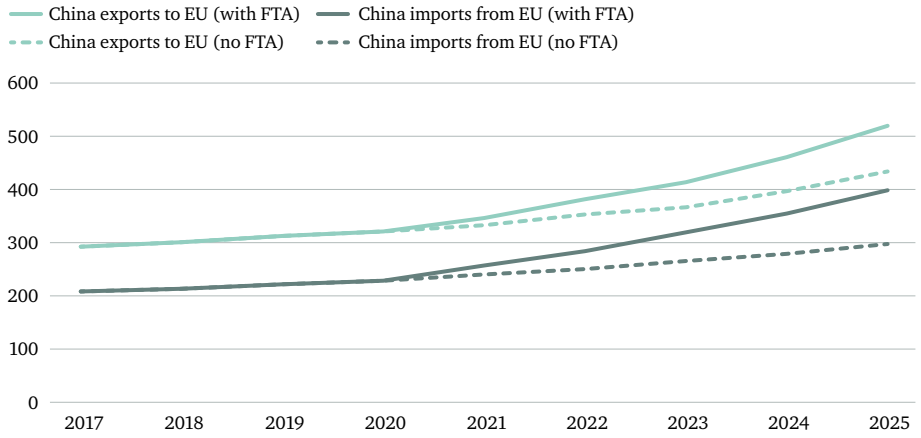
Research by the China Center for International Economic Exchanges (CCIEE) using the gravity model for trade indicates that, if China and the EU27 can effectively promote structural reform and economic transition over the next decade, and if China's annual GDP growth rate remains stable around 6 per cent while that of the EU27 is above 1.7 per cent, then the bilateral annual trade volume between the EU and China could exceed €678 billion in 2025. Of this, China's exports to the EU would be €404 billion and imports €277 billion, leaving a surplus of €126 billion (in 2016 prices). If the progress in China's supply-side reform is less successful than expected, and the EU's economic growth rate is lower, then bilateral trade could still reach €659 billion, with China's exports and imports at €393 billion and €271 billion, respectively.

Reductions in tariffs are well known to have trade-creation effects, although the exact magnitudes are subject to numerous uncertainties. Research by CCIEE conducted for this project suggests that, if an FTA were signed between the EU and China in 2020 achieving zero tariffs, then by 2025 the EU's exports to China would increase by a third over the benchmark scenario of no FTA, and China's exports to the EU

[46] See for example Haugh, D., Kopoin, A., Rusticelli, E., Turner, D. and Dutu, R. (2016), 'Cardiac Arrest or Dizzy Spell: Why is World Trade So Weak and What Can Policy Do about It', OECD Economic Policy Paper, No. 18 (September 2016), Paris: OECD Publishing, http://www.oecd-ilibrary.org/economics/cardiac-arrest-or-dizzy-spell_5jlr2h45q532-en (accessed 24 Jul. 2017).
[47] EU-China 2020 Strategic Agenda for Cooperation, Section II.I., http://eeas.europa.eu/archives/docs/china/docs/20131123_agenda_2020__en.pdf (accessed 6 Sep. 2017).
[48] China Britain Business Council (2016), 'UK companies confident in post-Brexit trade with China', http://www.cbbc.org/cbbc/media/cbbc_media/KnowledgeLibrary/Reports/CBBC-Survey-2016-(English).pdf?ext=.pdf (accessed 7 Jul. 2017).
[49] García-Herrero, A. and Xu, J. (2016), 'What consequences would a post-Brexit China-UK trade deal have for the EU?', Bruegel policy contribution 18, 7 October 2016, p. 6, http://bruegel.org/2016/10/what-consequences-would-a-post-brexit-china-uk-trade-deal-have-for-the-eu/; García-Herrero, A. and Xu, J. (2016), 'UK-China agreement on trade in services in no substitute for a UK-EU deal', Blog post, Bruegel, http://bruegel.org/2016/12/uk-china-agreement-on-trade-in-services-is-no-substitute-for-a-uk-eu-deal/ (accessed 24 Jul. 2017).

would be 20 per cent higher. While an FTA will not be reached so soon, Figure 3 sets out CCIEE's projections on the impact on trade of such an FTA, assuming a cautiously optimistic outlook for economic growth.[50]

Figure 3: Outlook for bilateral EU–China trade ($ billion)



Source: CCIEE (2017), 'The China–EU Relations 2025: Deepening the China-EU Economic and Trade Cooperation During the Period of Uncertainty', paper prepared for a roundtable on *EU–China Economic Relations: Looking to 2025* at Chatham House, 9–10 February 2017.

This would help improve the EU–China trade balance somewhat, but there would still be notable imbalances. For this project, Bruegel researchers analysed the impact of a Chinese structural slowdown on trade imbalances between the EU and China. China's weaker growth would dampen its consumption capacity, reducing its imports from the EU, whereas China's exporting capacity would decrease at a much slower pace, partly due to its production overcapacity. In this case, the EU's trade deficit may not easily be addressed even in the longer run,[51] even in value-added terms, as China continues to move up the value chain. However, CCIEE researchers concluded that, with China's policies of expanding domestic consumption gradually taking effect, the volume and growth rate of imports will increase significantly, especially in the service sector. Increasing China's imports from the EU is therefore likely to become an important part of EU–China economic cooperation.[52]

Lawrence Lau of The Chinese University of Hong Kong suggests that one way of mitigating future tensions over EU–China trade would be to explore exchange rate coordination between the two sides.[53] This proposal draws on work by Robert Mundell for efficient and incentive-compatible exchange rate coordination between two trading partners. The idea is that, in the case of the EU and China, the two would agree on a range for fluctuation for the renminbi/euro exchange rate of, say, 5 per cent up or down from an initial central rate and would agree to intervene respectively to

[50] Unpublished calculations by CCIEE, using a computable general equilibrium model.
[51] García-Herrero, A. and Xu, J., 'China's structural slowdown: implications for China-EU trade', unpublished Bruegel research.
[52] Zhang Y. (2017), '主动适应外贸新形势' [Actively adapt to the new circumstances in international trade], 国际经贸 [*International trade*], 2: pp. 4–6, 20.
[53] For further details, see Lau, L. J. (2016), 'EU-China: Towards a Strategic Relationship', presentation delivered at the Bruegel Annual Meeting 2016, Brussels, 6 September 2016, http://www.igef.cuhk.edu.hk/igef_media/people/lawrence-lau/presentations/english/160906.pdf (accessed 24 Jul. 2017).

restrain fluctuations within this range.[54] Such an arrangement would stabilize expectations of the renminbi/euro exchange rate for exporters, importers and direct investors in both the EU and China.

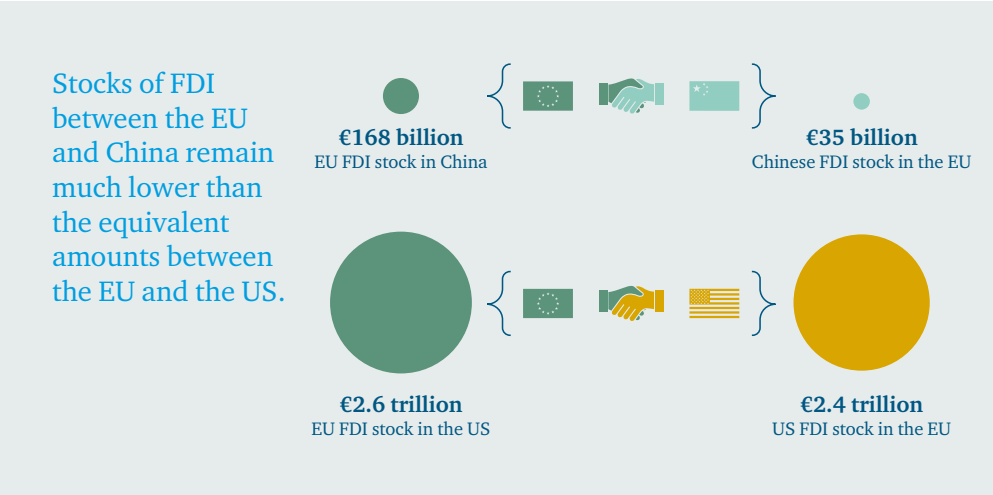
Given these uncertainties, achieving the best sequencing for deeper development of the EU–China economic relationship is important. Considering the current dynamics of the relationship, we recommend that the EU and China focus on the bilateral investment agreement and, once it is completed, the two sides should open negotiations on establishing an EU–China FTA.

[54] When the euro is too strong and threatens to exceed the upper limit of the band, the European Central Bank would buy renminbi with euros, driving up the renminbi exchange rate relative to the euro. When the euro is too weak and threatens to breach the lower limit of the band, the People's Bank of China would buy euros with renminbi, driving up the euro exchange rate relative to the renminbi.

3. Investment Relations

Investment flows in context

Although the development of trade has led the EU28 and China to become each other's main source of imports and second-largest export markets, historical investment flows between the EU and China are not as significant for either side. The data show that stocks of FDI between the EU and China remain much lower than between the EU and the US. By 2015, the stock of EU FDI in mainland China amounted to €168 billion (€288 billion including Hong Kong), and investment stock from mainland China to the EU was €35 billion (€115 billion including Hong Kong), compared to the stock of EU FDI in the US of €2.6 trillion and US FDI stock in the EU of €2.4 trillion.[55] Given the size of trade and their respective economies, there is plenty of room for two-way investment flows to grow substantially.



Over the last few years, the EU's significance as an investment destination for Chinese companies has grown rapidly

As shown in Table 1, in most recent years, China has accounted for around 2 per cent or less of the EU's annual outward FDI flows. But the drivers of this investment have been changing. Before around 2005, the advantages of FDI in China were related to low-cost labour, land and less stringent environmental regulations; from 2005 onwards, FDI was increasingly driven by the growing domestic market; from 2012, it has increasingly been the expanding services sectors that have attracted more FDI.

Over the last few years, the EU's significance as an investment destination for Chinese companies has grown rapidly. It accounted for 5.8 per cent of total outbound Chinese FDI between 2009 and 2015 inclusive.[56] According to figures from a different dataset compiled by the Rhodium Group, in 2016, FDI transactions from mainland China into the EU of €36 billion were recorded, up from €20 billion in 2015.[57]

[55] Eurostat (2017), 'The EU continues to be a net investor in the rest of the world', Eurostat News Release, 12 January 2017, http://ec.europa.eu/eurostat/documents/2995521/7788281/2-12012017-BP-EN.pdf/684f355f-8fa6-4e75-9353-0505fa27f54f (accessed 24 Jul. 2017). For European Commission data for mainland China only, see European Commission (2017), 'Trade: Countries and regions', http://ec.europa.eu/trade/policy/countries-and-regions/countries/china/ (accessed 24 Jul 2017). Chinese statistics sourced from Ministry of Commerce by CCIEE show a stock of EU FDI in mainland China (not including Hong Kong) of $80 billion, and stock of investment from mainland China in the EU of $64 billion.
[56] Authors' calculation from original data used to produce Table 1.
[57] Hanemann, T. and Huotari, M. (2017), 'Record flows and growing imbalances: Chinese investment in Europe in 2016', MERICS papers on China, No. 3 (January 2017), pp. 8–9, https://www.merics.org/fileadmin/user_upload/downloads/MPOC/COFDI_2017/MPOC_03_Update_COFDI_Web.pdf (accessed 24 Jul. 2017).

Table 1: EU and mainland China's relative weight in each other's outward investment

Year	Proportion of China-to-EU FDI in China's aggregate outward FDI (%)	Proportion of EU-to-China FDI in EU's aggregate outward FDI (%)
2003	4.01	1.62
2004	3.56	2.31
2005	3.32	1.18
2006	0.82	0.94
2007	1.84	0.50
2008	0.81	1.56
2009	3.53	1.25
2010	5.89	1.37
2011	6.65	1.23
2012	5.81	1.30
2013	4.80	2.13
2014	8.43	2.19
2015	5.25	1.37

Source: Calculations by CCIEE based on data from National Bureau of Statistics, http://data.stats.gov.cn/easyquery.htm?cn=C01; http://fec.mofcom.gov.cn/article/tjsj/; http://www.fdi.gov.cn/CorpSvc/Temp/T3/Product.aspx?idInfo=10000544&idCorp=1800000121&iproject=33&record=7109 (accessed 10 Aug. 2017).

There are good reasons to expect further growth in FDI between the EU and China over the next decade, though the profiles of investment flows in each direction are likely to differ. From a Chinese perspective, there will be a continued push factor for investment in Europe due to the excess savings in China and the scarcity of opportunities for domestic investment. One of the major pull factors is the increasing availability of target investments and companies after the global financial crisis and their relatively lower cost. For example, in response to these factors, China and Central and Eastern European countries have established the '16+1' initiative to intensify and expand economic cooperation across a wide range of topics, including Chinese investment into the region, though so far this investment has materialized slowly.[58]

The main drivers of Chinese investment in Europe will remain access to markets, brands and technology, with some sectoral investment driven by the competitiveness of Chinese manufacturing. There are also investments that aim to acquire technology and brands with a view to developing the Chinese market back home. As noted earlier, European investment in China is increasingly driven by potential access to Chinese consumption and service sectors, although it has slowed down in the past few years due to lower returns and challenges in market access.[59]

Market access and investment relations

Market access is currently the most challenging strategic issue. Many EU companies are concerned by what they see as restrictions to market access into China and discrimination against EU investors operating there, including explicit or implicit

[58] Hanemann, T. and Huotari, M. (2015), 'Chinese FDI in Europe and Germany: preparing for a new era of Chinese capital', MERICS Papers on China, June 2015, p. 6, https://www.merics.org/en/merics-analysis/papers-on-china/cofdi/merics-analyses/ (accessed 24 Jul. 2017).
[59] EU figures show a drop in FDI to China in recent years, from €20.9 billion in 2013 to €6 billion in 2015; see: http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Foreign_direct_investment,_EU-28,_2012%E2%80%932015_YB17.png.

preferential policies or subsidies for certain enterprises, as well as the dominance of SOEs in certain sectors. An index of restrictiveness in market access compiled by the OECD[60] suggests that China is one of the countries in the world with the most restrictive access for foreign investors.

By 2025, Chinese investment into the EU is likely to have grown substantially from current levels

On the other hand, China remains a major global destination for FDI, and the next area slated for further opening to foreign investment is the service sector. Reducing restrictions to market access in this area will be another crucial point of focus between the EU and China. In this context, recent statements of the Chinese government have indicated its desire to improve the business environment for foreign investors,[61] following its announcement earlier in 2017 of policies to promote further openness in the economy.[62] The latest series of measures announced by the State Council in mid-August,[63] notably in areas related to the call for detailed timetables and roadmaps for achieving openness in individual industries, and the pledges to step up protection of intellectual property, establish a nationwide work permit system for foreign talent working in China and improve visa processing, have been welcomed by European businesses.[64] China today is much more open than Japan and South Korea were when they were at similar stages of development. Chinese companies also note that EU standards in the high-technology sector limit their ability to invest and sell into the EU.

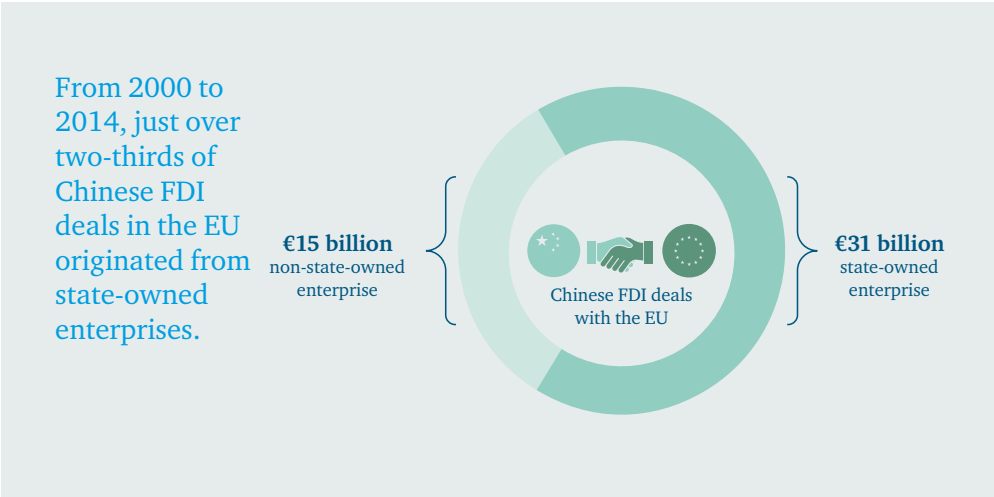
By 2025, these disparities will still exist, but the gap should have narrowed, and discrepancies within both the EU and China may be as significant as divergences between the two. Broad interests in protecting and promoting FDI will have converged somewhat, but so will direct competition between European and Chinese companies. Chinese researchers note that the EU's standards on human rights, intellectual property, environmental protection, labour welfare and other issues limit the scope for Chinese companies investing or exporting into the EU. In the end, though, there can be many positive effects from FDI in both directions, including job creation, encouraging innovation, and promoting global competitiveness. The opening of service sectors in China should also lead to an increase in European investment in the country.[65] All told, by 2025, Chinese investment into the EU is likely to have grown substantially from current levels.

State-owned enterprises

From the EU's perspective, potential discrimination in favour of Chinese SOEs by way of implicit or explicit support is a key issue in the EU–China investment agreement negotiations (see below).[66] In 2000–14, over two-thirds of Chinese FDI deals in the EU (€31 billion out of €46 billion) originated from SOEs,[67] though recently privately

[60] OECD (2017), OECD Regulatory Restrictiveness Index, http://stats.oecd.org/Index.aspx?datasetcode=FDIINDEX (accessed 24 Jul. 2017).
[61] Xinhua (2017), 'China to further optimize business environment, open wider to foreign investment: Xi', 17 July 2017, http://news.xinhuanet.com/english/2017-07/17/c_136450941.htm (accessed 28 Jul. 2017).
[62] State Council (2017), 国务院关于扩大对外开放积极利用外资若干措施的通知 [Notice of the State Council on Several Measures on Promoting Further Openness and Active Utilisation of Foreign Investment], 17 January 2017, http://www.gov.cn/zhengce/content/2017-01/17/content_5160624.htm (accessed 24 Jul. 2017).
[63] State Council (2017), 国務院關於促進外資增長若干措施的通知 [Notice on Several Measures for Promoting the Growth of Foreign Investment], 16 August 2017, http://www.gov.cn/zhengce/content/2017-08/16/content_5218057.htm (accessed 24 Aug. 2017).
[64] See European Chamber of Commerce in China, The Voice, 24 August 2017, http://mailings.europeanchamber.com.cn/form.do?agnCI=1&agnFN=fullview&agnUID=1.4ny.1boe.3xkz.2f4ytba21p (accessed 24 Aug. 2017).
[65] García-Herrero, A. and Xu, J. (2017), 'How to handle state-owned enterprises in EU-China investment talks', http://bruegel.org/reader/state-owned-enterprises-in-EU-China (accessed 28 Jul. 2017).
[66] Demertzis, M., Sapir, A. and Wolff, G. (2017), 'Europe in a New World Order', p. 6, and García-Herrero and Xu (2017), 'How to handle state-owned enterprises in EU-China investment talks'.
[67] Hanemann, T. and Huotari, M. (2015), 'Chinese FDI in Europe and Germany', p. 37.

owned enterprises (POEs) have become more significant, and their share is likely to grow rapidly over the coming decade. The potential for Chinese SOEs, possibly supported by explicit or implicit subsidies, to break into the EU market has raised concerns from the EU over unfair competition. Other EU concerns relate to perceptions that Chinese investments in Europe may be driven in part by non-economic objectives and therefore pose political or national security risks.



From China's perspective, government support cannot result in sustainable competiveness for Chinese enterprises over the long-term. Market-orientated Chinese POEs increasingly represent the mainstream of the Chinese economy.[68] In 2016, POEs accounted for 61 per cent of the manufacturing sector, whereas SOEs accounted for only 28 per cent and wholly foreign-owned enterprises (WFOEs) accounted for 11 per cent (Table 2). There is a similar pattern in parts of the service sector, such as real estate, where the POEs accounted for 68 per cent and the SOEs accounted for 30 per cent. In other service sectors, however, Chinese POEs and WFOEs accounted for relatively low shares. For example, SOEs accounted for up to 90 per cent of the businesses operating in the financial sector. As with trade, therefore, the reform and opening-up of China's service sector to FDI will be a key next step in the EU–China relationship.

Until the introduction of market-oriented reforms, SOEs were a feature of some European economies as well, and challenges against state subsidies are still being filed at the WTO against some of these companies. The Chinese government argues that China is currently at this similar earlier stage of development. Since joining the WTO, China has promoted economic development and SOE reform by opening up its economy. Meanwhile, the aggregate economic size of Chinese industrial SOEs has declined dramatically since the reforms of the late 1990s (Figure 4). In total, according to China's National Bureau of Statistics, in 2015, SOEs accounted for 38.8 per cent of total assets for above-scale industrial enterprises,[69] although the share is higher when looking at larger listed companies, where about two-thirds of assets are in the hands of SOEs.

[68] Good examples are Huawei, DJI (Dajiang Innovations Science and Technology Co., Ltd.) and BGI.
[69] Since 2011, 'above-scale' has been defined as enterprises with annual revenues of over RMB 20 million.

Table 2: Share of state-owned (SOE), privately owned (POE) and wholly foreign-owned enterprises (WFOE) in China (2016)

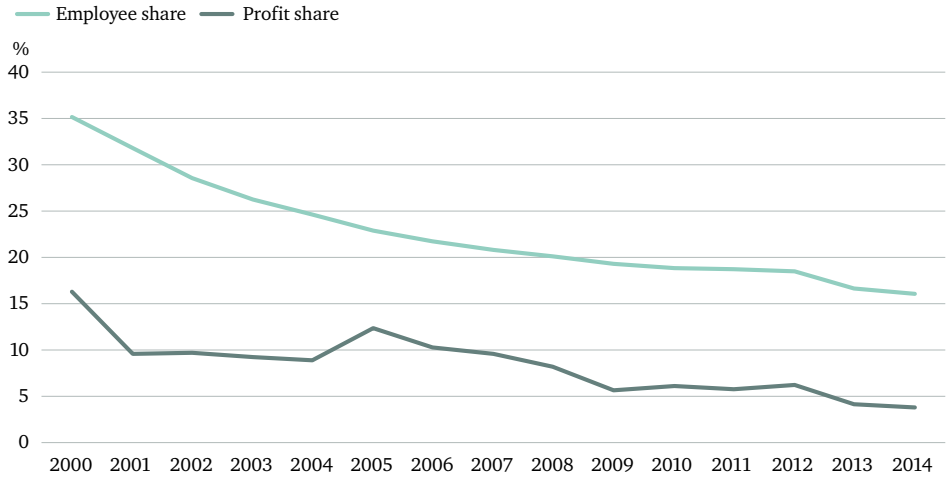
Sector	SOE (%)	POE (%)	WFOE (%)
Health	89.9	10.1	0.02
Wholesale and Retail	61.9	34.2	3.9
Construction	53.2	46.4	0.3
Culture	86.6	12.5	0.9
Education	73.4	25.4	1.1
Finance	90.7	7.8	1.5
Accommodation	54.4	43.1	2.4
Real Estate	29.6	67.8	2.6
Research	69.9	26.5	3.5
Commercial Leasing	76.2	15.4	8.4
Restaurant	35.0	56.0	9.0
Manufacturing	27.8	61.2	11.0

Source: Bruegel research, based on Chinese National Bureau of Statistics and Bureau van Dijk ORBIS/AMADEUS dataset.[70]

International criticism and domestic consensus all point to the need to reform China's SOEs and to accelerate the setting of factor prices in line with market forces. In accordance with the principle of competitive neutrality, the Chinese authorities have pledged to create a fair and non-discriminatory competitive environment for SOEs, POEs and WFOEs alike. In addition, China is accelerating market-oriented reform of its land management system, credit management system, and energy resource management system, so that the market mechanism can play a decisive role in the allocation of resources. The Chinese government indicates that, by 2020, it will have accomplished a thorough reform of China's SOEs, applying modern corporate governance standards and ensuring that SOEs operate alongside other businesses in accordance with market rules.[71] The net result, however, is that, by 2025, SOEs are likely to remain a salient feature of the Chinese business and political-economic landscape.

[70] A comprehensive introduction to the dataset is provided in Kalemli-Ozcan, S., Sorensen, B., Villegas-Sanchez, C., Volosovych, V. and Yesiltas, S.(2015), *How to Construct Nationally Representative Firm Level Data from the ORBIS Global Dataset*, September 2015, http://econweb.umd.edu/~kalemli/Data_Description_2015_09_final.pdf (accessed 14 Aug. 2017).
[71] The Central Committee of the Communist Party of China and State Council (2015), 关于深化国有企业改革的指导意见 [Guidelines on Deepening the Reform of State-Owned Enterprises], 24 August 2015, http://www.sh.xinhuanet.com/2015-09/14/c_134620921.htm (accessed 14 Jun. 2017).

Figure 4: Allocation of employee and profit share at Chinese industrial SOEs



Source: Bruegel calculations based on China Statistics Yearbooks. See García-Herrero, A. and Xu, J. (2017), 'How to handle state-owned enterprises in EU-China investment bank talks', Bruegel Policy Contribution, No. 18, http://bruegel.org/wp-content/uploads/2017/06/PC-18-2017_2.pdf (accessed 14 Aug. 2017).

Reforming the environment for foreign investment

Restrictions on the sectors into which EU and other foreign companies can invest are another source of friction, and one which the Chinese government is seeking to address. China has amended its 'Catalogue for the Guidance of Foreign Investment Industries', reducing the number of 'special' restrictions on foreign investors from 93 in 2015 to 63 in 2017, and a 'negative list' has been compiled for foreign investors.[72] The restricted sectors include television, press and publications and inland shipping, linked to national security,[73] and other relevant sectors of the economy, such as finance and telecommunications, where Chinese SOEs tend to dominate the market.[74] For the sectors without restrictions, the government has simplified the procedure and only requires filing or registration to be undertaken for foreign investment projects.

This is part of a wider Chinese shift from a system of controlling market access beforehand to one in which supervision is exercised after entry. For example, the Shanghai Free Trade Zone (FTZ) was the first to implement the 'licence granted before certification' practice, further reducing the required pre-approval items. China appears to be moving, over the long run, in line with international rules designed to assure a fair, transparent and predictable market system for both foreign investment and its private sector.[75]

The Chinese government has already indicated it aims to offer pre-investment national treatment to foreign investors (the same treatment as domestic companies) and in due course treat foreign-funded and domestic enterprises equally. For example,

[72] The 'negative list' means that foreign investment is permitted in China unless the sector is listed as prohibited or restricted. Previously all sectors were categorized as prohibited, restricted and permitted.
[73] As noted by CCIEE, this tends to be in line with international practice.
[74] A complete list of the sectors on the negative list can be found in the official webpage of the State Council of the People's Republic of China, http://www.gov.cn/zhengce/content/2017-06/16/content_5202973.htm (accessed 28 Aug. 2017).
[75] Hao, J. and Li, D. (2017), 'Progress, Difficulties and Promotion Strategic of the EU–China BIT Negotiation', paper prepared for a roundtable on *EU–China Economic Relations: Looking to 2025* at Chatham House, 9–10 February 2017.

recognizing that opening more sectors is mutually beneficial, as it will also help China further reform its economy, the Chinese government has recently launched the negative list across the country.[76]

However, this remains an issue of some contention between the EU and China. European businesses have long called for the national application of a shorter negative list, which would significantly lift market access restrictions for EU companies in the currently prohibited industries. They have also called for laws for Chinese and foreign companies to be unified, as well as for Chinese policies to support innovation and research development to be applied equally to all companies (as is the case in the EU). Finally, notwithstanding the steps described above, many in Europe still feel that greater access to markets is needed, as well as working towards equal treatment, legal certainty, and protection of intellectual property rights.[77]

A recent source of European concern are the targets that the Chinese government has set for domestic production in 10 high technology sectors as part of the 'Made in China 2025' initiative, which may lead to more restricted market access and insistence on IP transfer in the future. In response, Premier Li Keqiang announced in March 2017 that foreign-invested enterprises could equally access the benefits of 'Made in China 2025'. It is also possible that the Chinese initiative could complement Europe's own plans for future industrial development, encouraging greater cooperation in EU–China innovation and industrial partnership (see Chapter 6) so that EU and Chinese businesses can leverage each other's expertise in these areas for their mutual benefit.

Chinese analysts also note that there are investment restrictions in the EU, which operate on a national level,[78] and these will need to be addressed in investment agreement negotiations. Chinese priorities for an investment agreement include a relatively complete negative list with sufficient exception clauses; a reduction in investment barriers, including the de-politicization of and greater transparency in national security reviews; investment protection (which would be expected in any investment agreement); and due regard and approval for investment by SOEs.[79]

Given these EU and Chinese perspectives and priorities, it seems unlikely that political nervousness in Europe over Chinese investment will have dissipated by 2025. Nevertheless, the EU should have developed better common institutional processes for dealing with Chinese (and other) inward FDI by then, over and above the two key instruments – competition policy and the dispute resolution framework – that currently regulate the operation of Chinese SOEs in the EU. It is possible that some of these processes will serve as an EU 'firewall' against what are perceived to be unfair Chinese investments into the EU, but they will inevitably heighten Chinese concerns about rising protectionism in Europe. The recently agreed EU–China dialogue on state aid control could contribute to these processes.[80]

[76] China Economic Review (2017), 'China rolls out first nationwide negative investment list', 30 June 2017, *China Economic Review*, http://www.chinaeconomicreview.com/china-rolls-out-first-nationwide-negative-investment-list (accessed 24 Jul. 2017).
[77] European Union Chamber of Commerce (2017), 'European Business in China: Business Confidence Survey'.
[78] For example, some purchasers can only acquire agricultural products produced in the EU and vessels used for inland water transport should be owned by legal persons of EU member countries. Non-EU citizens or enterprises need to be specially approved to purchase real estate in Austria, while foreign lawyers in Belgium can only practise with a licence from the foreign ministry and after they have lived in the country more than six years. Hao, J. and Li, D. (2017), 'Progress, Difficulties and Promotion Strategies of the EU–China BIT Negotiation', paper prepared for a roundtable on *EU–China Economic Relations: Looking to 2025* at Chatham House, 9–10 February 2017.
[79] Hao, and Li, 'Progress, Difficulties and Promotion Strategies'.
[80] European Commission (2017), 'EU-China Summit: moving forward with our global partnership', European Commission Press Release, 2 June 2017, http://europa.eu/rapid/press-release_IP-17-1524_en.htm (accessed 24 Jul. 2017).

An EU–China investment agreement

When China joined the WTO in 2001, there were three driving forces: first, to participate in globalization and to integrate into the world economy; second, to bring domestic institutional mechanisms in line with international practices; and, third, to force SOEs and domestic private enterprises to compete with foreign firms.

The international environment has changed considerably since then. First, as noted earlier, trade is now a less significant driver of global GDP growth, as the differentials between labour costs in developed and emerging markets have narrowed, supply chains have proliferated, and new technologies encourage more 'on-shoring' of industrial production. Second, new opportunities to increase international trade are likely to involve a far greater extent of services, including finance, pensions and insurance, high technology research and development and innovation, and medical care.

At present, there is no single framework for investment relations between the EU and China. Instead, nearly all EU member states have bilateral investment treaties

This means that the EU–China economic agenda will focus more on opening up each other's service sector, along with ensuring intellectual property protection. From a Chinese perspective, opening up the service sector to trade and investment with EU businesses would introduce another wave of positive market pressure, provided there is fair and non-discriminatory market access for foreign companies as well as Chinese private enterprises and SOEs. In short, an EU–China investment agreement has the potential to spur a new round of market-opening in China, especially if it includes, for example, a shorter negative list than that currently in force nationally.

At present, there is no single framework for investment relations between the EU and China. Instead, nearly all EU member states have bilateral investment treaties (BITs) with China,[81] agreed mainly in the 1980s and 1990s with the objective of bringing FDI into China and protecting the legitimate operations of foreign businesses. There are numerous disparities among these bilateral agreements with EU member states. Since the entry into force of the EU's Treaty on the Functioning of the European Union (the 'Lisbon Treaty') in 2009, however, competence over investment has been transferred from member states to the EU, though the process of implementing this has been complex and slow, given divergences in existing national regulations and policies towards inward investment.[82]

At the 16th EU–China summit in November 2013, the two sides agreed to launch negotiations for an investment agreement to replace the existing bilateral agreements between individual member states and China, the first time the EU had begun investment agreement negotiations since Lisbon.[83] Such an agreement would provide for the progressive liberalization of investment as well as the elimination of restrictions for investors in each other's markets. Given the changing nature of both economies, the agreement is meant to address ways of further opening the services sectors. It would also bring clarity to the regulation of investment across the EU – some three-quarters of Chinese companies invest in the EU with an eye on the EU market.[84] Successful conclusion of the negotiations should also bring benefits for regional and global economic growth more broadly. Studies have shown that more FDI leads to

[81] Ireland has no BIT with China. Belgium and Luxembourg have a joint BIT with China.
[82] For background, see Meunier, S. (2014), 'Divide and conquer? China and the cacophony of foreign investment rules in the EU', *Journal of European Public Policy*, 21(7): pp. 996–1016.
[83] This comprehensive agreement on investment is often also referred to as the EU–China BIT. On the European side, authority to negotiate was granted to the Commission by the Council on 18 October 2013.
[84] Meunier (2014), 'Divide and conquer?', p. 1009.

more international trade, as investors involve the host country more heavily in global supply chains.[85]

Negotiations so far have reached agreement on the principle of non-discrimination, the need to improve regulatory environments to protect investors, and the need to establish rules for labour and environmental issues.[86] But they have also revealed a number of issues that need to be resolved by the two parties, in particular over market access, which both sides see as the most difficult issue. Using the EU–China investment agreement as a means to address EU concerns about SOEs, for example, may prove less effective than hoped. Particularly rigorous rules for SOEs would still leave room for politically connected Chinese firms of whatever ownership, perhaps with government support, to enter the EU market.

A key step to tackle this issue would be for China to take into greater account prevailing international principles of corporate governance, while the EU would resist the rise of protectionism from within. The overarching objective should be to construct stable, fair, transparent and predictable business climates in both China and the EU, so that companies from both the EU and China are on an equal footing with each other, with equal market access regardless of their country of origin. This will require a process of convergence towards similar treatment of EU and Chinese investment and the institutional frameworks under which they operate. To this end, the EU is likely to continue to press for clauses guaranteeing 'competitive neutrality', meaning that no business entity is advantaged or disadvantaged solely because of its ownership.[87] The Chinese side recognizes competitive neutrality in principle, but believes that when enterprises are not just making decisions for commercial objectives, but taking on public service functions, provisions on competitive neutrality should not apply.

As a result of these differences in emphasis, a mechanism will be required on both sides to deal with investment disputes. Some of the existing BITs contain investor–state dispute settlement (ISDS) provisions, although until mid-2016 there had only been one instance of a formal bilateral dispute between a Chinese investor and an EU member state, and none brought by a European investor against the Chinese state. It has been suggested instead that the EU and China should use a public court system for settling bilateral investment disputes, as in the EU–Canada Comprehensive Economic and Trade Agreement, rather than ISDS.[88]

The apparent inclination of the new US administration not to pursue its bilateral investment treaty with China (negotiations under President Obama were close to completion) may lower the incentive for the EU to reach a rapid agreement with China. If an EU–China investment agreement were reached, however, the two sides could then begin negotiations on a broader free trade agreement.

[85] For examples of analysis of this idea see Liu, L. and Graham, E. (1998), 'The Relationship Between Trade and Foreign Investment: Empirical Results for Taiwan and South Korea', Working Paper 98–7, Peterson Institute for International Economics, https://piie.com/publications/working-papers/relationship-between-trade-and-foreign-investment-empirical-results (accessed 24 Jul. 2017); Fontagné, L. (1999), 'Foreign Direct Investment and International Trade: Complements or Substitutes?', *OECD Science, Technology and Industry Working Papers*, 1999/03, Paris: OECD Publishing, http://www.oecd-ilibrary.org/science-and-technology/foreign-direct-investment-and-international-trade_788565713012 (accessed 24 Jul. 2017).
[86] Brief summary drawn from Hao, J. and Li, D. (2017), 'Progress, Difficulties and Promotion Strategies of the EU–China BIT Negotiation', paper prepared for a roundtable on *EU–China Economic Relations: Looking to 2025* at Chatham House, 9–10 February 2017.
[87] Capobianco, A. and Christiansen, H. (2011), 'Competitive Neutrality and State-Owned Enterprises: Challenges and Policy Options', *OECD Corporate Governance Working Papers*, No. 1, Paris: OECD Publishing, http://www.oecd-ilibrary.org/governance/competitive-neutrality-and-state-owned-enterprises_5kg9xfgjdhg6-en (accessed 24 Jul. 2017).
[88] Demertzis, Sapir and Wolff (2017), 'Europe in a New World Order', p. 6.

4. Infrastructure Investment and Connectivity

Investing in infrastructure

Both the EU and China have set out strategic goals of investing in infrastructure and connectivity to enhance development domestically and externally. These were outlined in European Commission President Jean-Claude Juncker's Investment Plan for Europe (the 'Juncker Plan') and China's Belt and Road Initiative (BRI). The relationship between the two initiatives, and the wider question of EU responses to the BRI, are recognized within the formal EU–China agenda, with a connectivity platform agreed in 2015, and the BRI has featured increasingly in bilateral relations between EU member states and China. The two initiatives provide a good platform for the development of deeper and broader economic ties between the EU and China, though concerns in the EU need addressing.[89]

The Belt and Road Initiative

In late 2013, Chinese President Xi Jinping first proposed building a Silk Road Economic Belt and a 21st-Century Maritime Silk Road, a vision of connectivity across land and sea routes, in trade, investment, finance, policy, and people-to-people exchanges.[90] This concept has subsequently been developed in government papers and most recently at the Belt and Road Forum held in Beijing in May 2017, where attendance reflected the extension of the initiative's scope to over 100 countries.[91] According to the Chinese government's official document on the initiative, 'The Belt and Road run through the continents of Asia, Europe and Africa, connecting the vibrant East Asia economic circle at one end and the developed European economic circle at the other'.[92]

Attitudes in the EU towards engagement with the BRI are still evolving. Some in the EU see the BRI more as a stimulus programme to help Chinese companies re-direct their economic activity outwards at a time of slowing domestic growth and as a vehicle through which Chinese companies will export their current surplus domestic industrial capacity to third countries. For the Chinese leadership, this does not take account of shortages in the relevant countries. The BRI is a multi-decade initiative that will strengthen significantly connectivity between the different regions along its routes, thereby stimulating economic demand and supply and accelerating the development of the global economy (whereas surplus capacity is at most a medium-term problem).[93] To do so, the BRI aims to bring global (including Chinese) technologies, capital and management experience together with the labour forces and other resources of the countries along the Belt and Road.[94]

There has also been scepticism whether the BRI across Eurasia can make meaningful inroads to their intended 'terminus' in Western European capitals, or whether it might

[89] For analysis of EU member states' responses to the initiative, see van der Putten, F-P., Seaman, J., Huotari, M., Ekman, A. and Otero-Iglesias, M. (eds.) (2016), 'Europe and China's New Silk Roads', European Think-Tank Network of China Report, December 2016, The Hague, https://www.clingendael.nl/publication/europe-and-chinas-new-silk-roads (accessed 24 Jul. 2017).
[90] Summers, T. (2016), 'China's "New Silk Roads": sub-national regions and networks of global political economy', *Third World Quarterly*, 37(9): pp. 1628–1643.
[91] The State Council (2015), 'Full Text: Vision and Actions on Jointly Building Belt and Road', Xinhua, 28 March 2015, http://news.xinhuanet.com/english/china/2015-03/28/c_134105858.htm (accessed 24 Jul. 2017). Xinhua (2017), 'Full text of President Xi's speech at opening of Belt and Road forum', Xinhua, 14 May 2017, http://news.xinhuanet.com/english/2017-05/14/c_136282982.htm (accessed 24 Jul. 2017).
[92] The State Council (2015), *Vision and Actions*, Section III.
[93] State Council of the PRC (2016), '习近平推"一带一"建设工作座谈会上发表重要讲话' [Xi Jinping delivers an important speech at the work forum on promoting the construction of "One Belt One Road"] 17 August 2016, http://www.gov.cn/guowuyuan/2016-08/17/content_5100177.htm (accessed 30 Aug. 2017).
[94] Ibid.

instead become stalled in central Europe.[95] However, most lines of the Europe–China rail routes have their terminus in Western Europe, and the strategic interest for central and eastern European countries to engage China in investing in their infrastructure is particularly strong, as this is where the current infrastructure bottlenecks lie.[96] This is reflected in several projects that have been grouped under the BRI, such as the 350-kilometre Belgrade–Budapest railway link, which is being re-developed by a Chinese-led joint venture,[97] and the Chinese leasing of and investment in Greek port facilities, especially at Piraeus.

When it comes to trade, the EU could be an important beneficiary of the Belt and Road Initiative due to a reduction in transport costs from infrastructure development, in particular new rail freight routes from China to Europe

The implications of the BRI for EU–China relations more broadly could range from trade, infrastructure and investment to financial connectivity and the internationalization of the renminbi.[98] Recent Chinese statements, including at the May 2017 forum, and responses from EU officials, have made clear that the initiative is open to all EU member states and that the EU as a whole could serve as the western 'anchor' of the initiative.

When it comes to trade, empirical research by Bruegel scholars has shown that the EU could be an important beneficiary of the BRI due to a reduction in transport costs from infrastructure development, in particular new rail freight routes from China to Europe, including direct freight routes from cities in China, such as Chongqing, Chengdu, Zhengzhou, and Wuxi, to European cities including Duisburg, Madrid, Łodz, and even London.[99] The EU could see its global trade increase by 6 per cent due to the initiative once all related projects are completed, with EU companies potentially using these new routes to increase their exports to a growing Chinese consumer market.[100] Ultimately, the Eurasian land bridge (part of the BRI's economic corridors) could also be used to connect to South Korea and Japan.

The success of the BRI will depend on how it is funded. Here the depth and expertise of European financial markets, including the City of London, will play a critical role, not only in ensuring that the BRI lives up to its potential, but also that it is undertaken in a way that contributes to macro-prudential stability in China and delivers sustainable growth. The fact that European financial institutions are well accustomed to investing in long-term high-risk ventures, and have the risk mitigation systems in place to do so, means that European private lenders could play an important role in the BRI.

Still, the foundation for EU–China financial connectivity in delivering the BRI will be the various public institutions and funds set up in response to both the BRI and the EU's own transport infrastructure needs. The newly-established AIIB and the BRICS New Development Bank will contribute over time to the BRI. By 2025 the AIIB should be a significant player, although its overall impact will still be lower than that of

[95] This impression was reinforced by an early unofficial Chinese list of 65 'Belt and Road countries', which only included the 16 European states that are part of the '16+1' initiative between China and Central and Eastern Europe (five of the 16 are not EU members).
[96] The authors are grateful to a Senior Advisory Group member for highlighting this point.
[97] This was referred to in Xi Jinping's speech at the May 2017 Forum; Xinhua (2017), 'Full text of President Xi's speech at opening of Belt and Road forum'. However, it is currently subject to investigation by the European Commission to see whether the tendering process in Hungary was in line with EU regulations; Financial Times (2017), 'EU on collision course with China over rail plan', *Financial Times*, 20 February 2017, https://www.ft.com/content/003bad14-f52f-11e6-95ee-f14e55513608 (accessed 7 Jul. 2017).
[98] Subacchi, P., Oxenford, M., Liu, D., Gao, H., Xu, Q., Li, Y., and Song, S. (2017), 'The "Belt and Road" Initiative and the London Market – the Next Steps in Renminbi Internationalization', Research Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/publication/belt-and-road-initiative-and-london-market-next-steps-renminbi-internationalization (accessed 24 Jul. 2017).
[99] National Development and Reform Commission (2016), '中欧班列建设发展规划（2016–2020）' [Plan for the development of China–Europe train services (2016–2020)], http://zfxxgk.ndrc.gov.cn/PublicItemView.aspx-?ItemID={6b49bf1d-ec80-4d08-8673-124fa15bed54 (accessed 24 Jul. 2017).
[100] García-Herrero, A. and Xu, J. (2016), 'China's Belt and Road initiative: can Europe expect trade gains?' Bruegel working paper, Issue 5, http://bruegel.org/wp-content/uploads/2016/09/WP-05-2016.pdf (accessed 24 Jul. 2017).

existing institutions such as the Asian Development Bank or the World Bank. European participation in the AIIB has been important in shaping its approach (as noted in Chapter 7), and is likely to contribute to the AIIB's modus operandi being close to that of existing multilateral development banks, including in transparency and commitments to environmental sustainability.

However, as Table 3 shows, subscribed capital for these institutions to date is still very small when compared with the potential requirement for infrastructure funding in developing economies across Asia, estimated by the Asian Development Bank to be $1.7 trillion annually from 2016–30.[101] Other sources, such as the China Development Bank and the Bank of China, could also contribute, though estimates show that they could only provide around $142 billion, still not enough to cover the total demand (Table 3).

The EU – like China – is a global external creditor that needs to invest savings in the rest of the world, and EU banks are by far the largest global cross-border lenders, including the original 65 Belt and Road countries (Figure 5). Their financial muscle could be useful in co-financing infrastructure development and connectivity, including through the Belt and Road.[102] A recent example of this was the commitment by Deutsche Bank to invest RMB 2.7 billion in the BRI.[103]

Table 3: Sources of Chinese and multilateral funding for the BRI

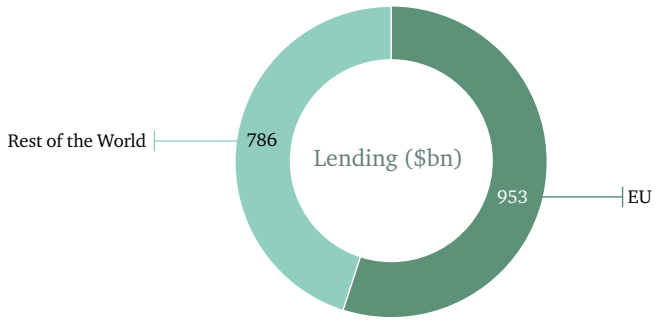
Multilateral banks	Capital	Announced
Asian Infrastructure Investment Bank	$100 bn	$10–14 bn expected to 2020 $1.7 bn loans in 2016
New Development Bank	$100 bn	$5–7 bn expected to 2020
Silk Road Fund	$40 bn + $15 bn*	$4 bn
Chinese banks		
China Development Bank	RMB 421 bn	$36 bn**
Export-Import Bank of China	RMB 150 bn	$19 bn**
Bank of China	RMB 294 bn	$20 bn
Industrial and Commercial Bank of China	RMB 356 bn	$67 bn disbursed
Funds		
Funding to conduct overseas renminbi business	N/A	$44 bn

* Additional capital recapitalized
** Additional special loan announced

Sources: Unpublished data courtesy of Natixis, updated May 2017; China Development Bank (2016), *Annual Report 2015* Beijing: China: Development Bank, http://www.cdb.com.cn/English/bgxz/ndbg/ndbg2015/201608/P020160831675498298329.zip (accessed 14 Aug. 2017); The Export Import Bank of China (2017), *Annual Report 2017*, Beijing: The Export-Import Bank of China, http://cms.eximbank.gov.cn/upload/accessory/20175/20175313147463471.pdf (accessed 14 Aug. 2017); http://pic.bankofchina.com/bocappd/report/201704/P020170425661765201164.pdf (accessed 14 Aug. 2017); http://v.icbc.com.cn/userfiles/Resources/ICBCLTD/download/2017/8_2016zyA20170331.pdf (accessed 14 Aug. 2017).

[101] Asian Development Bank (2017), *Meeting Asia's Infrastructure Needs*, Manila: Asian Development Bank, https://www.adb.org/publications/asia-infrastructure-needs (24 Jul. 2017).
[102] García-Herrero, A. (2017), 'China cannot finance the Belt and Road alone', Bruegel blog post, 12 May 2017, http://bruegel.org/2017/05/china-cannot-finance-the-belt-and-road-alone/ (accessed 24 Jul. 2017).
[103] García-Herrero, A. (2017), 'Other than climate change, can anything else unite Europe and China against Trump?' Bruegel blog post, 2 June 2017, http://bruegel.org/2017/06/other-than-climate-change-can-anything-else-unite-europe-and-china-against-trump/ (accessed 24 Jul. 2017).

Figure 5: Sources of cross-border bank lending into the BRI countries



Source: Bank for International Settlements, locational statistics, http://www.bis.org/statistics/ (accessed 14 Aug. 2017).

EU–China cooperation in strategic investments

It is in this context that the Juncker Plan could prove significant for EU–China ties. The plan calls for a European Fund for Strategic Investments (EFSI), which would deliver €315 billion ($361 billion)[104] into long-term projects, as well as the financing of small and medium-sized enterprises (SMEs) and mid-caps during 2015–17. The fund has since been extended to 2020 and expanded to €500 billion. Seed capital so far amounts to €21 billion, which can be used to leverage greater investment; and national development banks have pledged €42.5 billion. The Chinese government has expressed interest in co-financing some of the projects included in the Investment Plan for Europe. The plan should be supported by the EU's Trans-European Transport Network (TEN-T), established in July 1996. Although this plan has a strong focus on EU connectivity, it also seeks to connect to the EU's neighbourhood, bringing adjacent economies closer to the world's largest 'single market'.

In recognition of the overlap between the goals of the EU and Chinese connectivity plans, the two sides agreed to establish a Connectivity Platform following the High-Level Economic and Trade Dialogue in September 2015. Among the objectives were coordinating infrastructure development plans, exchanging information and enhancing transparency, and identifying opportunities for the Silk Road Fund to invest in the EFSI. From a European perspective, the platform also offers an opportunity to communicate the regulatory environment for investments in the EU.[105] Given that a likely consequence of strategic infrastructure investments is enhanced connectivity in the spaces between the EU and China, as well as greater Chinese presence in infrastructure development in the EU and its neighbourhood, it is important that dialogue on these plans should be enhanced in order to maximize the synergies. Hong Kong can also play a role in involving European businesses in the initiative (see Chapter 7).[106]

Dialogue can also deal with the risks that come from different approaches and interests. For example, Chinese companies often prefer to use Chinese labour and technology to deliver infrastructure projects overseas, while the EU insists on open

[104] Using an exchange rate of 1 USD = 0.8726 EUR.
[105] Makocki, M. (2016), 'The EU Level: "Belt and Road" Initiative Slowly Coming to Terms with the EU Rules-based Approach", in Van der Putten, et al. (2016), 'Europe and China's New Silk Roads', p. 70.
[106] Lau, L. J. (2017), 'How Hong Kong can be a key pillar for belt and road infrastructure', *South China Morning Post*, 8 June 2017, http://www.scmp.com/comment/insight-opinion/article/2097338/how-hong-kong-can-be-key-pillar-belt-and-road-infrastructure (24 Jul. 2017).

approaches to public procurement. There is therefore a need to coordinate public procurement rules, technical standards, labour standards, and dispute resolution mechanisms.

As well as coordinating plans and cooperation in financing projects, there are other commercial opportunities that arise from these strategic investments. Companies in the EU and China have complementary strengths: EU capabilities in technology and project management are more developed, whereas Chinese companies can use their competitive cost advantage. This commercial complementarity, whether on the platform of the BRI or other strategic initiatives, can help strengthen EU–China economic ties over the next decade, as is already apparent from the deepening bilateral cooperation between EU member states, such as the UK and France, and China in response to the BRI.[107]

[107] Van der Putten, et al. (2016), 'Europe and China's New Silk Roads'.

5. Energy and Climate Change[108]

The EU and China have many common interests when it comes to energy and climate issues. Both are significant importers of energy, with some shared concerns over energy security. Both have made the development of non-fossil fuel resources a priority, and – from different starting points and in different ways – are looking to rapidly increase their use of renewables. This links to their shared commitment to deal with climate change, with both the EU and China having introduced climate security as a policy goal from around a decade ago.[109] However, the dynamics of their interaction on energy are somewhat different from those on climate.

Energy security and energy relations

China currently accounts for the largest global share of primary energy production and consumption (at nearly 19 per cent and over 23 per cent, respectively), and carbon dioxide (CO2) emissions (27.3 per cent). The EU occupies third position behind the US in all three areas, with respective shares of 5.6 per cent, 12.4 per cent and 10.4 per cent.[110] This means that, in terms of global weight, the EU has become 'less relevant to the problem of climate change than it was two or even one decade(s) earlier',[111] though its ability to contribute to solutions has not declined proportionately. Meanwhile, the rapid evolution in China's energy needs and policy has brought it closer to international markets. Its objectives increasingly resonate with those of the EU: market-driven pricing mechanisms,[112] a smaller role for government, enhanced efficiencies, and a low-carbon trajectory.

Achieving these objectives has become more important given the early indications of policy change from the Trump administration, and the energy dynamics between the EU and China will be affected over the coming years by wider global developments, specifically in US policy. On the campaign trail, President Trump had criticized the Obama administration's focus on limiting emissions and pollution and promoting renewable energy.[113] Instead, US policy under Trump looks to be decidedly pro-fossil

[108] This section draws heavily on several papers prepared during the course of the project: Zachmann, G. (2016), 'International Emission Trade After Paris', prepared for the meeting in Beijing, 22–23 September 2016; Zhang, H. (2017), 'China and the EU Enhanced Cooperation in the Global Governance Reform', for the roundtable in London, 9–10 February 2017; and Meidan, M. (2017), 'EU–China Relations: Addressing Global Challenges in Energy and the Environment', also for the roundtable in London, 9–10 February 2017. See also Lee, B., Mabey, N., Preston, F., Froggatt, A. and Bradley, S. (2015), *Enhancing Engagement Between China and the EU on Resource Governance and Low-Carbon Development*, Research Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/publication/eu-china-cooperation-engagement (accessed 25 Jul. 2017).

[109] See Bo, Y., Biedenkopf, K. and Chen, Z. (2016), 'Chinese and EU climate and energy security policy', in Kirchner, E., Christiansen, T. and Dorussen, H. (eds.) (2016), *Security Relations between China and the European Union: From Convergence to Cooperation?*, Cambridge: Cambridge University Press.

[110] BP (2017), 'BP Statistical Review of World Energy June 2017', http://www.bp.com/content/dam/bp/en/corporate/excel/energy-economics/statistical-review-2017/bp-statistical-review-of-world-energy-2017-underpinning-data.xlsx (accessed 14 Aug. 2017); BP (2017), 'BP Energy Outlook 2035: January 2017', http://www.bp.com/content/dam/bp/excel/energy-economics/energy-outlook-2017/bp-energy-outlook-2017-summary-tables.xlsx. (accessed 10 Aug. 2017).

[111] Bo, Y. and Torney, D. (2016), 'Confronting the climate challenge: convergence and divergence between the EU and China', in Wang and Song (2016), *China, the European Union and the International Politics of Global Governance*, p. 216.

[112] For a recent example of gradual reforms, see Xinhua (2017), 'China unveils market reform for oil and gas industry', 21 May 2017, http://news.xinhuanet.com/english/2017-05/22/c_136302954.htm (accessed 25 Jul. 2017).

[113] These were reflected in the US's 2013 Climate Action Plan and 2015 Clean Power Plan.

fuels, and is likely to support production of oil and gas in the US, which will have implications for global markets.[114]

From 2010 to 2014, China's energy investment in the EU amounted to $18.17 billion, accounting for 31.2% of total Chinese FDI

This changing geopolitical energy context, and the broad alignment of EU and China policy goals, should bring the two closer together for increased coordination and consultation regarding global policy developments and their implications, and to ensure the underlying principles of global energy governance are upheld and strengthened. Neither the EU nor China want to see greater protectionism in the energy sector, both were strong supporters of the nuclear deal with Iran, and both would like to see sanctions against Iran eased. Chinese companies are becoming significant investors in energy infrastructure globally (including across the developing countries of the BRI). From 2010 to 2014, China's energy investment in the EU amounted to $18.17 billion, accounting for 31.2 per cent of total Chinese FDI.[115] Companies in the EU hold 40 per cent of the world's patents for renewable energy technologies.[116]

In 2016, the EU and China signed an energy cooperation roadmap agreement, promoting bilateral exchanges and cooperation in energy security, energy infrastructure construction, market transparency and other areas. In future, they aim to strengthen bilateral cooperation in design, low-carbon energy systems, energy legislation and policy, standard setting, pricing modes and governance mechanisms, especially in nuclear and renewable energy. Both the EU and China could push for stronger multilateral energy consultations as part of a likely framework of multi-level institutional cooperation.

Climate change

The EU and China were strong supporters of the climate deal reached in Paris in December 2015. Again, the approach of the new US administration will affect global governance in this area, particularly given President Trump's decision – announced on 1 June 2017 – to withdraw from the Paris Agreement. While the EU has long been a leader in global climate governance, it has prioritized other issues since the Copenhagen summit in 2009. During the Obama administration, global leadership in climate governance shifted somewhat to the US and China. The Paris Agreement would not have been possible without the actions of the Obama administration, which committed the US to cut greenhouse gas emissions and engaged with developing countries – particularly China – in the process. In November 2014, the US and China issued a landmark joint statement that put the world's two largest greenhouse gas emitters in lockstep to cut emissions, which was crucial in finalizing the Paris Agreement.

[114] As of April 2017, Trump had already moved to roll back some of Obama's priorities, including overturning rules restricting gas flaring associated with drilling on federal land, a requirement for publicly-traded oil, gas and mining companies to disclose any payments made to foreign companies, and a recent update to rules protecting waterways from pollution from coal mining. In addition, Trump's nomination of Rick Perry to be Energy Secretary and Scott Pruitt to head the Environmental Protection Agency (EPA) are seen as pro-oil as both are fossil fuel supporters from energy-rich states. He also appointed Rex Tillerson, the former CEO of ExxonMobil, as his Secretary of State. A number of additional initiatives are currently in the works. One priority will be to find a way of cancelling the EPA rules on methane emissions from new oil and gas wells that were finalized in 2016. The White House is also reportedly considering reducing the EPA's budget and workforce and scaling back its regulatory role. Easing some of the federal regulations on coal production could help lower coal production costs, and this could potentially allow coal to be competitive for longer with lower prices. Even though in the US, with stagnant power demand and ample supplies of cheap gas, coal is unlikely to stage a meaningful comeback, Trump's energy policy is decidedly pro-fossil fuels (the authors are grateful to Michal Meidan, associate fellow in the Asia programme at Chatham House, for this summary).
[115] Unpublished data from CCIEE. A substantial proportion of this investment is located in the UK, and so will not count in the EU–China figure after Brexit.
[116] European Commission (2017), *White Paper on the Future of Europe*, p. 10.

Although the EU and China have proactively dealt with climate change in recent years, when it became a clear stated policy priority for both,[117] their focus and specific approaches have differed. It has been argued that the Chinese government has hoped 'to address the climate threat in conjunction with economic development' and has 'attached greater importance to climate adaptation', whereas the EU has focused more on mitigation.[118] China has seen itself as a representative of the emerging economies, while acknowledging its role as a major contributor to global greenhouse gas emissions. Before the Paris Agreement, the two had divergent approaches to equity and differentiation, and there are still different emphases over the shouldering of responsibility between the global north and south, and in providing capital, technology and capability-building support to deal with climate change.

China has seen itself as a representative of the emerging economies, while acknowledging its role as a major contributor to global greenhouse gas emissions

In order to help sustain domestic and international progress towards the Paris goals, the EU and China could take a number of steps together, in accordance with the principle of common but differentiated responsibilities, as stated in the United Nations Framework Convention on Climate Change, such as:

- Demonstrate global leadership by maintaining their nationally-determined contributions (NDC).
- Cooperate closely in the UNFCCC process to develop sensible rules that ensure an effective implementation of the Paris Agreement.
- Play an active role to encourage other countries to meet and increase their climate goals.
- Secure financing for programmes in third countries, especially the least developed countries, so that momentum in tackling climate change threats does not fade. The RMB 20 billion being provided by China for a 'South–South' climate fund and the EU commitment to climate finance are good signs. Both sides should ensure that those finance streams are indeed used to tackle climate issues.
- Deepen their cooperation on data sharing and transparency in multilateral forums. As well as promote the dissemination of relevant successful experience, for example through a joint programme.
- Enhance exchanges and cooperation in relevant technology. Resolve intellectual property right (IPR) challenges and limitations on capital, which mean developing countries often cannot get technical assistance. Pursue exchange and cooperation in energy-saving technologies, as well as adaptation.

Climate finance

There is significant scope for a deeper EU–China agenda on climate finance, which this report addresses in greater detail later under financial services cooperation. The issue has come to the fore because of shifts in private finance and investment, driven by new opportunities and instruments for sustainable investment, the risks of stranded assets and requirements for disclosure, and incentives and carbon pricing beyond emissions trading.

[117] Lee, B., Mabey, N., Switzer, J., Froggatt, A., and Foulkes, R. (2007), 'Changing Climates: Interdependencies on Energy and Climate Security for China and Europe', Chatham House Background Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/sites/files/chathamhouse/public/Research/Energy,%20Environment%20and%20Development/161107_interdependencies.pdf (accessed 25 Jul. 2017).
[118] Bo, Biedenkopf and Chen (2016), 'Chinese and EU climate and energy security policy'. pp. 113–114.

Climate finance to support both mitigation of and adaption to climate change is a central topic in global governance. The European Union has developed a clear strategy and it is paramount for the EU to more forcefully ensure its implementation in order to succeed.[119] China has adopted a positive role in green finance, including internationally during its G20 presidency when it created the Green Finance Study Group. Germany subsequently adopted this in its G20 agenda for 2017, forming the Task-force on Climate-related Financial Disclosures. The People's Bank of China (PBoC) has played a particularly important role, leveraging public finance through interest subsidies and loan guarantees for banks to issue more green loans, and clarifying lender liabilities for environmental damage. On the capital markets, it has encouraged the development of green bonds and a potential green stock index. China has also stipulated the mandatory disclosure of environmental information by listed companies. For high-risk industries the government has also called for mandatory insurance for environmental pollution liability. Meanwhile, the EU is making determined progress in pushing its green finance agenda in the framework of the capital markets union.[120]

Emissions trading[121]

Another area the EU and China could explore further together is the development of emissions trading. The Paris Agreement set out core principles for international cooperation in this area. Given the different costs for emissions that similar companies from different countries face, there is an economic and political rationale for cross-border emissions trading, and the Paris Agreement includes a framework for the exchange of internationally transferred mitigation outcomes (ITMO) between parties. This framework recognizes:

- A two-tiered approach involving both bilateral and multilateral exchanges with flexibility in the regulations.
- All parties are equal.
- Countries decide whether and how to participate, and private actors cannot directly trade emission permits unless allowed to do so by countries that take part.
- Integrity principles, meaning that the net result of trading must be emissions reduction.

There are three general schemes that could be pursued: exchange of commitments (ITMOs), crediting systems such as the clean development mechanism in place under the Kyoto Protocol, and linking emissions trading systems where they are already in place (this has been gaining increased attention). The EU and China should work firstly to develop a global international emission trading infrastructure with an agreed set of minimum rules.

[119] Wolff, G. and Zachmann, G. (2017), 'European climate finance: securing the best return', Bruegel Policy Brief, 11 September 2015, http://bruegel.org/2015/09/european-climate-finance-securing-the-best-return/ (accessed 25 Jul. 2017).
[120] For a summary see Schoenmaker, D. (2017), 'Investing for the common good: a sustainable finance framework', Bruegel policy contribution, http://bruegel.org/2017/07/investing-for-the-common-good-a-sustainable-finance-framework/ (accessed 14 Aug. 2017).
[121] For more detailed discussion, see Zachmann, G. (2017), 'The Carbon Buyers' Club: International Emissions Trading Beyond Paris', Bruegel Policy Brief, March 2017, http://bruegel.org/wp-content/uploads/2017/04/PB-2017_03-280317.pdf (accessed 25 Jul. 2017).

In addition, the EU and China could work together – and, if appropriate, with other like-minded countries – to explore forming a group of countries interested in trading high-quality mitigation outcomes with stricter rules. Having the EU and China in such a scheme – as the largest carbon market and largest emitter respectively – would make a significant contribution. This would need to be based on good standards and the clear definition of robust arrangements.

6. Innovation: Science, Technology and Industrial Cooperation

Science, technology and innovation

Major technological breakthroughs in science, technology and innovation (STI), are likely to be key driving forces for global economic development to 2025 and beyond. They are also needed to find solutions to global and societal challenges such as climate change, clean energy, inclusive development, security, and active and healthy ageing. Both the EU and China need to foster STI development to help address the many serious economic, social and sustainability challenges they encounter. As a result, innovation is a strategic policy priority for both the EU and China, particularly important in dealing with long-term challenges of growth and sustainable development.[122]

This priority is formally recognized in the relationship between the EU and China, with a long-established platform for policy discussions on STI. During the 13th meeting of the Joint Steering Committee of the EU–China Agreement for Scientific and Technological Cooperation, on 29 March 2017, the EU and China agreed to continue promoting closer cooperation based on mutual benefit. More specifically, the two sides agreed to develop a package of joint flagship initiatives to be launched in 2017, targeting areas such as food, agriculture, the environment and sustainable urbanization, surface transport, aviation, and biotechnologies.[123] This complements ongoing corporate collaboration in other areas, such as information and communication technology.

Both the EU and China need to foster STI development to help address the many serious economic, social and sustainability challenges they encounter

The EU has introduced an 'Innovation Union' initiative as a key part of its 'Europe 2020' strategy, and the ideas behind it are likely to drive policy to 2025 and beyond. It aims to create an innovation-friendly environment across Europe, given that the Union faces 'an "innovation emergency" [and] remains fragmented and not innovation-friendly enough', and that 'thousands of its best researchers and innovators have moved to other countries'.[124] The Innovation Union has over 30 action points, including creating a genuine single European market for innovation, promoting cross-sector innovation partnerships within the EU, and cooperating better with international partners. In terms of funding, a 'Horizon 2020' program has been launched with nearly €80 billion available between 2014 and 2020 to help fund scientific research and innovation, and to attract additional private investment.[125] The EU aims to invest 3 per cent of GDP in R&D by 2020, which would stimulate demand for at least one million more researchers in the next decade. Cooperation with leading global innovative companies – including those based in China – can support technological development and give a much-needed boost to Europe's competitiveness in technology. For example, European carmakers and Chinese technology companies have been working together on research and development for next generation transport solutions such as autonomous cars.

In China, the government recognizes the need to strengthen substantially its overall foundation of science, technology and innovation, despite the rapid developments it has already made in recent years. Innovation has been highlighted as one of the five key strategies of development in the 13th Five-Year Programme (2016–20) to achieve sustainable development, and it includes a range of specific quantitative targets, such

[122] Lau, L. J., Kwok, K. C. and Summers, T. (forthcoming), *EU–China Innovation Relations,* Research Paper, London: Royal Institute of International Affairs.
[123] European Commission (2017), 'EU-China Summit: new flagship initiatives in research and innovation', 2 June 2017, http://ec.europa.eu/research/iscp/index.cfm?pg=china (accessed 14 Aug. 2017).
[124] European Commission, 'Why do we need an Innovation Union?', http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=why (accessed 14 Aug. 2017).
[125] European Commission (2017), 'What is Horizon 2020?', https://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020 (accessed 25 Jul. 2017).

as a 2.5 per cent target for the R&D/GDP ratio by 2020.[126] Other major strategies to promote technology and innovation include focusing on selected, important technology areas, promoting innovation capabilities and effectiveness through improving incentives and administrative efficiency, training human talent, building regional innovation clusters, and integrating China into global innovation networks. The separate 'Made in China 2025' plan aims to promote the use of technology and innovation in manufacturing ('smart manufacturing'),[127] while the BRI targets cooperation frameworks with other countries, so as to promote international exchange and collaboration in technology and innovation.

There are also different levels of R&D intensity across China, with seven coastal provinces already exceeding the 2.2 per cent R&D/GDP ratio. From a fundamental economic perspective, China's economy has entered a new stage of development, with an increasing emphasis on qualitative development over quantitative growth. The transformation of the country's industrial structure and the upgrading of consumption demand have led to an explosive growth in demand for quality, high-end products and services, as well as technologies such as clean energy, and other innovative ideas. This transformation process will most likely continue to 2025, and is opening up new opportunities for EU enterprises to work together with their Chinese counterparts, notably in areas such as modern agriculture, advanced manufacturing and service industries. There are numerous new innovative Chinese companies that are acting as disruptors in their sectors in China, which may provide potential partners for EU companies in commercial innovation.

The shape of innovation relations

China and the EU have different comparative advantages in technology and innovation. The EU has a long history and competitive strength in a wide range of industrial technologies and in selected service industries, such as financial services. China has been a strong performer in adopting technology and a fast follower rather than a leader in most areas, even though the country is on the frontier in STI in selected fields, such as agricultural research, mathematics and super-computers.[128] At the same time, the large and rapidly growing Chinese consumer market allows innovation at the level of consumer products and services to take place quickly, and in this area China's global leadership may be enhanced over the coming years. The explosive growth in Chinese ICT companies ranging from mobile communications infrastructure, software and hardware to e-commerce, financial technology (fintech), and sophisticated consumer 'apps', combined with the size of the homogenous domestic market, means that Chinese companies may 'leap frog' their Western counterparts in these areas. The products and services that EU and Chinese companies create and design together could become as important as what they sell to each other.

China's extensive manufacturing ecosystem also provides a rich base for the development of industrial technology and innovation. The adoption of automation in China

[126] The State Council (2016), '十三五国家科技创新规划' [13th Five-Year Programme on Science, Technology and Innovation], 28 July 2016, http://www.121jk.cn/news/zhengcefagui/show49386.html (accessed 25 Jul. 2017).
[127] The State Council (2015), '中国制造2025' [Made in China 2025], http://news.china.com/domestic/945/20150519/19710486.html (accessed 25 Jul. 2017). For analysis in English, see Wübbeke, J., Meissner, M., Zenglein, M. J., Ives, J. and Conrad, B. (2016), 'Made in China 2025: The making of a high-tech superpower and consequences for industrial countries', *MERICS Papers on China*, No. 2 (December 2016), Berlin: Mercator Institute for China Studies, https://www.merics.org/fileadmin/user_upload/downloads/MPOC/MPOC_Made_in_China_2025/MPOC_No.2_MadeinChina_2025.pdf (accessed 25 Jul. 2017).
[128] Nesta (2013), 'China's Absorptive State: Innovation and research in China', 1 October 2013, http://www.nesta.org.uk/publications/chinas-absorptive-state-innovation-and-research-china (accessed 25 Jul. 2017).

is proceeding apace – the number of industrial robots produced in China in the first seven months of 2017 grew at a year-on-year rate of over 50 per cent – and is having an impact on Chinese companies' investment strategies, for example, the acquisition of Kuka in Germany by Midea in 2016. This has also fed into the Made in China 2025 strategy, which highlights both the desire for Chinese companies to move up the value chain and the challenges they face in doing so, as well as the similar challenges shared by Chinese and European companies in many areas (this can be seen by comparing Made in China 2025 with Germany's Innovation 4.0). The amount of human capital in China that could contribute to STI development is also increasing rapidly, both in quantity and in quality, though its historical cost advantage is being gradually eroded.

To evaluate the current state and future prospects in innovation connectivity between the EU and China requires a general comprehension of the nature of trans-border innovation in an era of globalization. This can be understood in terms of networks, namely the idea that innovation is achieved most effectively and efficiently when those engaged in innovation are connected, not just within national borders but across them. In 2012, Xi Jinping said the 'development of science and technology requires extensive international cooperation. Science and technology have no nationality'.[129] Or as a 2012 STI strategy report produced for the EU puts it, 'the overall principle should be to allow and encourage "the best and brightest" to participate in projects, regardless of their geographical location'.[130]

The adoption of automation in China is proceeding apace and is having an impact on Chinese companies' investment strategies

The geographical fragmentation of production and value chains, particularly in the past few decades, incorporating multiple locations across many different countries, has resulted in the rapid growth of production and innovation networks. These networks have enabled the proliferation of specialized firms and institutions across different geographies, collaborating with and competing against each other. Multinational corporations, universities and research institutes from the developed world, such as those from the EU, have played a central role in this network innovation process as they command a substantial lead in science and technology. One estimate shows that in 2005, European firms conducted over 40 per cent of their R&D outside their home countries,[131] a growing proportion, which is much higher than the 12 per cent and 16 per cent of R&D conducted by US firms overseas in 2000 and 2010, respectively.[132] Engaging in global R&D has become more important due to the increasing importance of the developing world, particularly China, as a major market, a production base, and a source of large quantities of educated talent. This means that global firms must 'be able to read local markets and understand local innovations intimately and incorporate them as effectively as possible and then leverage them globally as efficiently as possible'.[133]

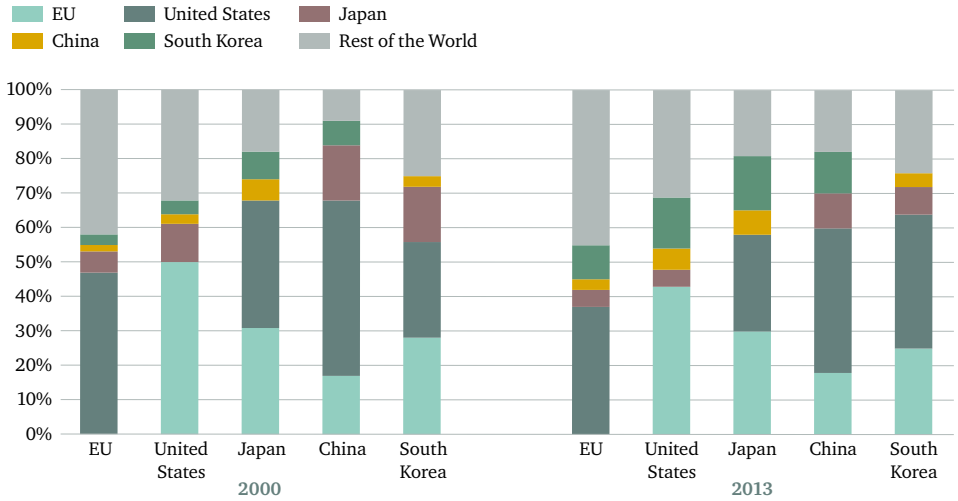
The roles played by European and Chinese actors in these global innovation networks vary across industries and are changing over time. In many sectors, fundamental new technologies remain, on the whole, the domain of European multinational corporations (MNCs). But China has been an important location for these MNCs to develop product adaptations. Large numbers of young, hardworking and comparatively low-cost Chinese engineers have become an integral part of these MNCs' global R&D

[129] Cited in Nesta (2013), 'China's Absorptive State', p. 61.
[130] Serger, S. S. and Remoe, S. (eds.) (2012), *International Cooperation in Science, Technology and Innovation: Strategies for a Changing World*, Brussels: European Commission, p. 12, http://ec.europa.eu/research/iscp/pdf/publications/report-inco-web-4.pdf (accessed 14 Aug. 2017).
[131] Athreye, S. and Cantwell, J. (2016), 'A Bigger Bang for the Buck: Trends, Causes and Implications of the Globalization of Science and Technology', in Dutta, S., Lanvin, B. and Wunsch-Vincent, S. (eds) (2016), The Global Innovation Index 2016: Winning with Global Innovation, http://www.wipo.int/edocs/pubdocs/en/wipo_pub_gii_2016-chapter2.pdf (accessed 25 Jul. 2017).
[132] Kennedy, A. (2017), 'Is the United States offshoring high-tech leadership to China?', *East Asia Forum*, 17 May 2017, http://www.eastasiaforum.org/2017/05/17/is-the-united-states-offshoring-high-tech-leadership-to-china/ (accessed 25 Jul. 2017).
[133] Athreye and Cantwell (2016), 'A Bigger Bang for the Buck'.

networks. This also means that foreign R&D centres make up a significant part of the Chinese innovation system.[134] In many cases, innovations in a large overseas market such as China, can be adapted by the MNCs concerned for global application.

China's contributions to global innovation are increasing not only in terms of scale, but also in form. Apart from gaining global leadership in selected areas of STI, such as those related to high-speed rail and mobile technology, China has been a major source of the increasing number of 'emerging market MNCs'. China is also a main actor in global 'South–South' technology-related FDI – where developing countries invest in other developing countries. The opportunities for Chinese and EU firms to partner with each other to invest in third countries are increasing. Figure 6 identifies the distribution of collaborators for co-authored publications for 2000 and 2013; clearly there is plenty of space for more co-authored publications between Chinese and EU researchers.

Figure 6: Distribution of partners in international scientific collaborations, as measured by publications that are internationally co-authored (2000, 2013)[135]



Source: Data sourced from European Commission, Directorate General for Research and Innovation, and Unit for the Analysis and Monitoring of National Research Policies, based on Scopus database.
Note: Elements of estimation were involved in the compilation of the data.

While there is general agreement that global networks and collaboration are the best way to promote innovation, there is a continued pull of national politics and regulations in both the EU and China towards a 'techno-nationalist' approach.[136] There will always be a tendency for politics to push to protect or enhance 'indigenous innovation'. The pressures for this may increase over the coming years in the context of President Trump's 'America First' policy approach, recent calls from some EU politicians for a corresponding 'Buy European' policy in the EU, China's 'Made in China 2025' initiative, and a more general backlash against globalization. But even so, Chinese investment into Europe is likely to grow through to 2025, and, for major European companies, the fundamental drivers behind China's economic growth will mean that the country will remain an important pull factor in their global business development.

[134] Steinfeld, E. (2010), *Playing Our Game: Why China's Rise Doesn't Threaten the West,* New York: Oxford University Press.
[135] See Veugelers, R. (2017), 'The challenge of China's rise as a science and technology powerhouse', Bruegel policy contribution, http://bruegel.org/2017/07/the-challenge-of-chinas-rise-as-a-science-and-technology-powerhouse/ (accessed 28 Jul. 2017).
[136] This term is taken from Nesta, *China's Absorptive State*.

Industrial cooperation

Under the 'new normal' in China's economy, the transformation of the current industrial structure, upgrading of consumption and increasing demand for high-end products and services provide new space for EU–China industrial cooperation. Research by CCIEE (Table 4) shows that by 2020 new growth across a number of Chinese industries is likely to generate an output value of RMB 60–80 trillion. In March 2017, research by *Finance Magazine* showed that the top seven industries by growth potential were old-age healthcare, pharmaceuticals, tourism and leisure, artificial intelligence, new energy, education and training, and cultural industries.[137]

Table 4: Cultivation of new industry growth points

Industry	Output value, 2014 (RMB trillion)	Estimated output value, 2020 (RMB trillion)
New-generation IT	5	11–14
Health	6.6	14–16
High-end Equipment Manufacturing	2.6	8–10
New Energy	1.2	3.8
Energy Conservation and Environmental Protection	3.8	8.5–10
Maritime	1.23	3.6
Bio-industry	3.8	10
Cultural	2.4	5.5
Tourism	3.25	7–8

Source: Jiang J. and Hong Q. (2016), 'New Industry Growth Points of 13th Five-Year Programme (2016–2020) for Fostering the New Engine for Economic Development', China Market Press (Chinese language), January 2016.

The emergence of these sectors demonstrates that opportunities for EU–China business-to-business collaboration continue to shift from traditional manufacturing to advanced manufacturing and modern service industries. There is scope for strengthening relations in devising and implementing development strategies such as 'Made in China 2025', Germany's 'Industry 4.0' and France's 'Future industry'. For example, agriculture is strategically important to both the EU and China, and is closely bound to issues such as food safety, climate change, and balanced and sustainable development, and could be another area for closer cooperation. And, as discussed earlier, the two sides should strengthen industrial cooperation in renewable energy, low-carbon and environmental management, and related areas. Other areas for future development are cross-border e-commerce and support for the development of small and medium-sized enterprises in China and the EU.

[137] The full list of industries covers old-age healthcare, pharmaceuticals, tourism and leisure, artificial intelligence, new energy, education and training, culture, energy conservation and environmental protection, new energy vehicles, information communication technology (ICT), biotechnology, financial services, new materials, high-end equipment manufacturing, military industries, digital creative industries, modern logistics, biological identification, agriculture, energy and automotive. See Boao Forum for Asia (2016), *2016 Asian Forward-looking Indicator*, http://ws3.cdn.caijing.com.cn/2016/0322/1458641685410.pdf (accessed 10 Aug. 2017).

Policy implications

To facilitate the economic and commercial benefits of the continued globalization of innovation, it is important for European and Chinese leaders to encourage and promote an open outlook that goes beyond thinking about innovation as a national or regional project, and adopts measures to foster the engagement of European and Chinese researchers and enterprises in global networks.

The EU and China should focus on cybersecurity, where their concerns are increasingly aligned. The digital world has become too important to leave unregulated

One precondition for further enhancement of global innovation networks is the convenient and frequent movement of people involved in innovation processes. This requires flexible and easy-to-navigate visa regimes on all sides. In addition, governments should do what they can to encourage and support student exchanges, including the pursuit of overseas work experience after the completion of studies. Chinese researchers who have studied overseas and returned to China are particularly valuable for the development of collaboration,[138] and the EU and China should try to develop similar networks of researchers with research experience in China.

The encouragement of innovation networks will need to be balanced by risk management measures to maintain incentives for individual firms and institutes to invest in innovation. These should include existing risk management by transnational firms to ring-fence parts of their product research and development processes. On the government side, continued upgrading of intellectual property protection mechanisms is essential – this is an area where the Chinese government has been focusing resources over recent years, for example through the establishment of specialized IPR courts that have jurisdiction over the whole country, though much more needs to be done to build institutional capacity and to nurture business culture. In addition, there is a growing shared interest in working together to establish strong frameworks to protect intellectual property rights; this is increasingly important for China as innovation becomes a larger part of its economy, as well as for the EU.

Finally, the growth in technology brings related regulatory and policy challenges. One in particular on which the EU and China should focus is cybersecurity, where their concerns are increasingly aligned. The digital world has become too important to leave unregulated. Action is required to improve consumer protection and digital security, and reduce the risks of hacking attacks. The EU and China should intensify discussion of how to influence legislation, issue security guidelines, and monitor and enforce them. It is important that the EU and China promote inclusive and cooperative solutions that reflect the fact that these challenges are shared globally.[139]

[138] Frietsch, R. and Tagscherer, U. (2014), 'German-Sino collaboration in science, technology and innovation', *Innovation Systems and Policy Analysis*, No. 43, p. 16, http://www.isi.fraunhofer.de/isi-wAssets/docs/p/de/diskpap_innosysteme_policyanalyse/discussionpaper_43_2014.pdf (accessed 25 Jul. 2017).
[139] The authors are grateful to contributions from the project's Senior Advisory Group in highlighting these points.

7. Financial Services and Financial Cooperation

Financial cooperation between the EU and China[140]

As has been the case for investment, financial sector cooperation between the EU and China has gathered momentum in recent years. Its potential scope covers institutions, markets, infrastructure, regulation and global governance. Recent developments such as European participation in the AIIB and China's accession to the European Bank for Reconstruction and Development in 2016 have symbolized the willingness to develop financial cooperation further. Europeans also supported the IMF's decision in 2015 to allow the renminbi into the basket of currencies that make up special drawing rights. Following China's efforts to internationalize the renminbi, a moderate proportion of trade between China and some EU countries has begun to be settled in renminbi. London accounts for two-thirds of the EU's share of renminbi business, with 5.2 per cent of total international renminbi transactions.[141]

The size of the financial sectors in the EU, China and the US is relatively similar, though with different compositions.[142] Although the financial sectors of the EU and China are at different stages of development, the two share some common challenges in implementing reform. The EU and Chinese economies are both dominated by bank financing, but are experiencing a rapid expansion of their capital markets. They have capital markets of similar scale and both are looking to develop stronger private – particularly corporate – bond markets, including through the EU's Capital Markets Union (CMU). The financial crisis exposed the vulnerability of the EU's corporate sector to banking crises, while China has had to deal with rapid growth in shadow banking[143] and other market inefficiencies.

European banks are the largest cross-border lenders, well ahead of both the US and China. But the global financial system remains dominated by the US dollar,[144] used for 42 per cent of global settlements. The euro has become the second most important international currency after the US dollar, with its use in 31 per cent of global settlements. While the renminbi has become more widely used, it remains a small player at 1.6 per cent of global settlements.[145]

An underlying challenge over the next decade will be dealing with the different development trajectories of China's financial sector and that of the EU. Each has its own policy mechanisms and institutional structures, for example in central banking. Although the eurozone faces challenges, EU financial markets and institutions are mature, while China's financial system is still going through numerous reforms, with a gap in regulatory capacity, business infrastructure and technical conditions compared to that of the EU. Given this, financial sector cooperation should develop steadily and gradually, with a short-term focus on markets, infrastructure, regulation and policy coordination, as well as global financial governance. The EU and China should also look into longer-term coordination in managing global financial market stability.

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[140] This section has benefited from contributions by Silvia Merler of Bruegel.
[141] Data as of April 2017 from SWIFT RMB Tracker, https://www.swift.com/our-solutions/compliance-and-shared-services/business-intelligence/renminbi/rmb-tracker/document-centre (accessed 17 Aug. 2017).
[142] See for example Véron, N. and Wolff, G. (2016), 'Capital Markets Union: A Vision for the Long Term', *Journal of Financial Regulation*, 2: pp. 130–153.
[143] The scale of shadow banking equated to almost 80 per cent of GDP in 2016, and about 16 per cent of total corporate lending. It is supported by banks because non-bank intermediaries such as trust companies and wealth management funds are conduits for banks. The China Banking Regulatory Commission (CBRC) has begun to regulate shadow banking, and risks could be mitigated by enhanced coordination among China's main financial sector regulators, addressing the current somewhat fragmented financial supervisory system and attendant resolution mechanisms.
[144] Subacchi, P. (2016), *The People's Money: How China is Building a Global Currency*, New York: Columbia University Press, pp. 19–20.
[145] Figures for April 2017, from SWIFT: https://www.swift.com/our-solutions/compliance-and-shared-services/business-intelligence/renminbi/rmb-tracker/document-centre (accessed 17 Aug. 2017).

The evolution of China's financial sector

While many EU financial institutions argue that the opening of China's financial services sector should be stepped up, and the operating environment in China for foreign institutions should be less restrictive, China's stated goal is to reform and open up its financial services industry in a step-by-step manner up to 2020 and beyond. Policy documents issued by China in recent years suggested that the country will adopt a more proactive process of liberalization. But EU businesses operating in China have expressed disappointment that such liberal policy intentions have not translated into actual practices sooner.

As China's economic interactions with the rest of the world continue to grow, the country's financial sector will need to integrate further globally

Indeed, as China's economic interactions with the rest of the world continue to grow, the country's financial sector will need to integrate further globally. Increasing trade and investment between the EU and China, and the increased presence of Chinese enterprises in the EU, require more financial services support from institutions in both the EU and China. Liberalizing the entry requirements of EU financial institutions in China's markets, and promoting the business development of Chinese financial institutions in the EU, is something that could usefully be included in a future EU–China investment agreement, and is likely to be an ongoing trend to 2025.

On a macro level, while China should liberalize its financial services more proactively, a carefully paced process of liberalization of capital controls and the capital account is needed so as to avoid causing undesirable or unanticipated side effects. For example, a recent IMF research paper has raised a note of caution on unqualified capital account opening.[146] In particular, the Chinese leadership believes that short-term capital flows should be liberalized only at the last stage of reform and in a progressive manner, as they are often the source of highest risk. This is a separate point from foreign ownership: China could open its financial sector to foreign competition without fully opening its capital account.

EU–China financial sector relations

The EU's financial markets and many EU financial services institutions are globally competitive and have traditional strengths in various sectors, such as in commercial banking, asset and fund management, and insurance. This is borne out by the fact that the EU has a net financial services trade surplus with China (Figure 7), though it should be noted that the overall size of this trade is small.

Engaging EU expertise in the process of reforming and modernizing China's financial services industry will help to enhance the efficiency of allocating capital in China and hence mitigate systemic risks, enhance financial instability and promote sustainable development. The fast growing and rapidly evolving economy and financial markets in China offer tremendous opportunities for business development, both for Chinese and EU institutions. As such, there is ample room for the EU and China to work together across a wide range of financial services, including mutually beneficial cooperation in capital market activities, such as the issuing of bonds and listing of companies in each other's markets, though the EU–China relationship in financial services will be affected by Brexit and the uncertainty over the future role of the City of London.[147]

[146] Ostry, J., Loungani, P. and Furceri, D. (2016), 'Neoliberalism: Oversold?', *Finance and Development*, Vol. 53 (2), www.imf.org/external/pubs/ft/fandd/2016/06/ostry.htm (accessed 24 Jul. 2017).
[147] See Subacchi, P., Oxenford, M., Liu, D., Gao, H., Xu, Q., Li, Y., and Song, S. (2017), 'The "Belt and Road" Initiative and the London Market". See also Sapir, A., Shoenmaker, D. and Véron, N. (2017), 'Making the best of Brexit for the EU27 financial system', Bruegel policy brief, 8 February 2017, http://bruegel.org/2017/02/making-the-best-of-brexit-for-the-eu27-financial-system/ (accessed 2 Jul. 2017).

Figure 7: Bilateral EU–China trade in total financial services

Source: Data are from Eurostat, International trade in services with provisional data for 2016, available at http://ec.europa.eu/eurostat/web/international-trade-in-services/data/database (accessed 6 Sep. 2017).
Note: Total financial services trade includes insurance and pension services and financial services.

Indeed, the momentum of EU–China cooperation in financial services has been building in recent years across a wide range of areas, including financial markets development, products and services promotion, strengthening financial infrastructure and mitigating systemic risks. Such cooperation and coordination is happening both among commercial financial services providers, and among financial market regulators and financial policy authorities.

At the same time, Chinese financial institutions have raised concerns about market access in Europe, due to differences in policy and regulation across EU member states, high costs and bureaucratic barriers. Nonetheless, they have been active in Europe through bond issuance (by China Development Bank, the PBoC, and the Ministry of Finance) and initiatives such as the joint establishment of the China Europe International Exchange in Frankfurt. Branches or subsidiaries of Chinese-funded financial institutions are growing to help Chinese enterprises invest and to finance and manage business expansion in Europe. For example, the Industrial and Commercial Bank of China (ICBC) had branches in 20 cities in Europe at the end of 2016.

Renminbi clearing arrangements have been reached with the UK, Germany, France and Luxembourg, and offshore renminbi business has grown. In October 2013, the PBoC and the European Central Bank (ECB) signed a three-year €45 billion bilateral currency swap, which has since been extended to 2019. Cooperation in insurance has also begun, with an MoU signed in 2016.[148]

[148] See China Insurance Regulatory Commission (2016), 中国保监会与欧洲保险和职业养老金管理局签署监管合作谅解备忘录 [China Insurance Regulatory Commission signs MOU with EU Committee of European Insurance and Occupational Pensions Supervisors], http://www.circ.gov.cn/web/site0/tab5207/info4032847.htm (accessed 10 Aug. 2017).

Infrastructure investment in Asia and the BRI

Economic and social development in China, and in Asia more generally, has led to a huge demand for infrastructure investment.[149] This is also an important backdrop to China's BRI. Meeting this demand will require an integration of a wide range of business and financial market capabilities so that governments, multilateral institutions, different types of financial institutions, private investors, and funds (both public and private), could all contribute in the process.

Long-term infrastructure investments, particularly in emerging countries, are highly risky and often not 'bankable'. Apart from the political, legal, regulatory and currency risks of these emerging economies, there are also construction risks, demand uncertainties and refinancing issues. But with the proper financial market, legal, engineering, business and other professional expertise, such risks could be disaggregated, priced and distributed to different fund providers and intermediaries that are best suited to manage them.

Leveraging the stronger ability of government and multilateral agencies and development banks to take country and political risks and in providing long-term funding, a proper risk disaggregation and packaging approach could provide many 'bankable' investment opportunities for different kinds of fund providers. A diverse range of multi-tiered financial market instruments including bonds, equity and loans will be required. Many fund providers from around the world, including the EU, will also be more willing to invest when exit routes are well designed and active markets (or market makers) for such exits are available. EU financial markets have a lot of such professional capabilities and expertise. This is an area where EU–China cooperation would yield positive results.

Green financing

Infrastructure should be long lasting. Promoting sustainability needs to start at the planning stage of infrastructure investment. Awareness of such needs and options of green designs are rising rapidly. More generally, achieving green development involves upgrading and renewing technologies, cleaning up and rejuvenating polluted sites and resources, and reviewing the way many goods and services are produced and consumed. A full-scale green transition will require action in many sectors and at many levels.

All these efforts will need to be financed. Developing 'green finance' is therefore a key component to this challenging transition to building more sustainable infrastructure. Green development is costly and, at present, rules and regulations allow non-green developments to pollute the environment and harm the public without paying any compensation. 'Requiring financial institutions to give full consideration to the environmental impact of their investments, reducing or even cutting off support to polluting projects, increasing the support for environmental restoration projects, and building a general framework of the green finance system that incorporate social risks and governance risks'[150] would change the behaviour of many enterprises.

[149] The Asian Development Bank, for example, has estimated that developing economies across Asia need to invest $1.7 trillion per year in infrastructure until 2030 to maintain economic growth momentum. Asian Development Bank (2017), *Meeting Asia's Infrastructure Needs*, Manila: Asian Development Bank, https://www.adb.org/publications/asia-infrastructure-needs (accessed 2 Jul. 2017).
[150] The International Institute for Sustainable Development, and the Development Research Center of the State Council (2015), *Greening China's Financial System,* Winnipeg: The International Institute for Sustainable Development, http://www.iisd.org/library/greening-chinas-financial-system (accessed 2 Jul. 2017).

Similarly, changing the rules that govern finance will also change the incentives and disincentives that guide investor behaviour. For example, making green finance a recognized asset class would entice more investors, including institutional investment funds, venture capital and private equity to take an active interest in green financing such as in 'green bonds'.

China is facing unprecedented challenges from the depletion and pollution of its resources and environment. The country is working hard to arrest and reverse this situation, and is championing a lot of sustainable policies, including green finance.[151] Sustainability is also a core principle of European development. London and Luxembourg, for example, have each actively established their own 'Green Stock Exchange' in an effort to promote 'green bonds' and 'green finance'.[152] In the long term, all developments and all financial services should be green. But the transition to this state of affairs will take a long time. The EU and China could work together to promote and pioneer these green finance initiatives.

Global portfolio rebalancing

Global investors have relatively little exposure to China's financial markets and will look to increase their holdings of Chinese financial assets as China's capital controls are relaxed gradually

An important structural trend that will unfold over the next decade is a rebalancing process across global investment portfolios. China's capital controls over a long period of time have meant that the foreign currency assets of China's non-government sectors are relatively small. As capital controls are relaxed gradually over the next decade, there is likely to be a huge demand for outbound portfolio investment by Chinese institutions and households, particularly given the expected rapid growth in wealth. Conversely, global investors have relatively little exposure to China's financial markets and will look to increase their holdings of Chinese financial assets as China's capital controls are relaxed gradually. This will result in an increase of capital flowing into China.

This large-scale global asset rebalancing process between China and the rest of the world will happen gradually over the medium term. The process will have to be facilitated by further opening up and reform of China's financial services sectors and markets, and by more active participation by foreign financial institutions in China as well as by Chinese financial institutions in overseas markets, particularly securities and fund management firms. There is a need for China to manage this opening up and reform process carefully so as to avoid generating unnecessary market imbalances and volatilities. This process is already gradually unfolding through various schemes such as Qualified Domestic Institutional Investor (QDII), Qualified Foreign Institutional Investor (QFII), stock connects and bond connect.[153] Cooperation and coordination with other financial services authorities on issues such as financial infrastructure, regulatory and supervisory requirements, and prudential management through the use of macroeconomic and financial policy tools, are important in the process.

[151] For a good summary of China's green finance initiatives see Ma, J. and Zadek, S. (2015), 'Greening China's Financial System', Project Syndicate, 11 May 2015, https://www.project-syndicate.org/commentary/china-sustainable-development-finance-by-ma-jun-and-simon-zadek-2015-05 (accessed 25 Jul. 2017).
[152] See, for example, Environmental Finance (2016), 'Green Stock Exchange', 7 November 2016, https://www.environmental-finance.com/content/the-green-bond-hub/green-stock-exchange.html (accessed 25 Jul. 2017); Luxembourg Green Exchange website at: https://www.bourse.lu/lgx (accessed 30 Jul. 2017).
[153] An explanation of QFII and QDII can be found at China Securities Regulatory Commission (2012), 'Regulations & policies', http://www.csrc.gov.cn/pub/csrc_En/OpeningUp/RelatedPolices/ (accessed 25 Jul. 2017); an explanation of stock connect can be found at HKEX (2016), 'Programme overview', http://www.hkex.com.hk/eng/market/sec_tradinfra/chinaconnect/videos.html (accessed 25 Jul. 2017); and an explanation of bond connect could be found at Hong Kong Monetary Authority (2017), 'HKMA welcomes bond connect', 16 May 2017, http://www.hkma.gov.hk/eng/key-information/press-releases/2017/20170516-6.shtml (accessed 25 Jul. 2017).

Working together to 2025

Looking out to 2025, given the scale of both the EU and Chinese economies and financial sectors, and their trade and investment flows, the EU and China will have a major role to play in shaping the global financial services industry. Policy coordination between the two is important to maintain global financial order and to mitigate systemic risks in global financial markets, particularly given the increasing integration of China's financial system with the rest of the world.[154] China's officials made positive comments about supporting the euro and buying sovereign bonds issued by European countries experiencing financial stress when the EU went through the euro crisis a few years ago, and efforts by European countries to support renminbi internationalization are good examples of such mutually supportive efforts.

There will also be more room for the EU and China to work together to help shape the global financial architecture, regulatory and supervisory standards, as well as global governance of financial markets and financial institutions (including green finance initiatives and cooperation to finance the BRI).

In the longer term, the EU and China could work together to promote the use of the euro and the renminbi, which could gradually reduce the dominant role played by the US dollar in global transactions, thus serving the long-term interests of both Europe and China. The widespread use of the US dollar in international transactions carries a number of costs for Europe and Asia. Unlike US firms, companies from Europe and Asia must take on exchange rate risks if they invest and trade in US dollars. And, at the national level, the dominance of the US dollar requires countries to hold substantial quantities of the currency in their foreign exchange reserves.

At the moment, while the share of the renminbi in global payments remains small (Table 5), the potential for it to develop into a regional currency in Asia is large due to China's growing trade and economic scale. The further internationalization of the renminbi is likely to lead to the development of more offshore renminbi businesses (including 'Dim sum' bonds), some of which would take place in European markets. In the long term, it is possible that the renminbi could, together with the US dollar and euro, become one of the world's three major reserve currencies.

Table 5: Renminbi as an international payment currency

	Renminbi		**Euro**		**US dollar**	
	% of global payments	*Rank*	*% of global payments*	*Rank*	*% of global payments*	*Rank*
Dec. 2011	0.29	17	43.00	1	–	–
Dec. 2012	0.57	14	39.78	1	33.34	2
Dec. 2013	1.12	8	33.21	1	39.52	2
Dec. 2014	2.17	5	28.30	2	44.64	1
Dec. 2015	2.31	5	29.39	2	43.89	1
Dec. 2016	1.68	6	31.30	2	42.09	1
Apr. 2017*	1.60	7	31.10	2	42.14	1

Source: Data from SWIFT.
*Latest available data.

[154] The spillover effects of China's financial market developments, including volatilities, to other markets have become increasingly evident as China continues to open up its financial markets. Even though China's capital controls still limit these repercussions, the events of June and August 2015 – namely the fall in Chinese equity markets and the adjustment in the way the renminbi exchange rate was set – showed how events in China created volatility in global markets. For a more general discussion of such spillover effects, see the analysis given in International Monetary Fund (2016), *Global Financial Stability Report: Potent Policies for a Successful Normalization*, April 2016, pp. 57–86, https://www.imf.org/…/pubs/ft/GFSR/2016/01/pdf/_text-v2pdf.ashx (accessed 25 Jul. 2017). The authors are grateful to participants in the SAG meeting for highlighting these points.

Finally, Hong Kong plays an important role in financial sector interactions between the EU and China, and as China's premier international financial centre. The EU and China should examine further the ways in which Hong Kong could be used as a bridge for EU–China cooperation in financial services (and other areas of economic relations).

Hong Kong's role in EU–China relations

Hong Kong has been China's international business and financial centre as the latter gradually opens up its economy and financial sector. It links mainland China with the outside world, and has developed into the global business hub of an increasing number of mainland Chinese enterprises.[155] China is further supporting the development of Hong Kong through 'leveraging its strengths and role in advancing the Belt and Road Initiative, the Guangdong–Hong Kong–Macao Greater Bay Area, Renminbi internationalization and other major development strategies'.[156] A substantial proportion of direct and portfolio investments flowing into or out of China flow through Hong Kong.[157] As of 2015, the stock of FDI from Hong Kong to the EU was €80 billion, over twice that from mainland China.[158] From 1993 to 2016, a total of about $700 billion in equity funds were raised by mainland enterprises through the Hong Kong stock exchange, making Hong Kong one of the world's top equity raising centres. The total market capitalization of mainland enterprises listed on the Hong Kong stock market was about $2 trillion at the end of 2016.[159] Large-scale fund raising by mainland enterprises or projects also happens through bank lending or bond issuance in Hong Kong.

Furthermore, Hong Kong has been used by the Chinese government as the testing ground for new policies related to the opening up of its financial markets such as QDII, QFII, RQFII, 'Dim sum' bonds, Stock Connects and Bond Connect. Hong Kong was the first offshore market to launch renminbi business back in 2004 and has since become the main global hub for renminbi trade settlement, financing and asset management. The CNH (the exchange rate of the renminbi in the Hong Kong market) has become the de facto offshore exchange rate of the renminbi while the renminbi HIBOR (the Hong Kong equivalent of London's LIBOR) has become the key indicator of renminbi interest rates in the offshore market.

Building on its traditional strength in trade, financial services and professional services, Hong Kong is well positioned to continue developing into a much more important global financial centre for China, particularly given its strong common law legal tradition and the 'One Country, Two Systems' constitutional framework.

[155] An annual survey shows that about 8,000 companies whose head offices are outside of Hong Kong have regional headquarters or regional offices in Hong Kong as of June 2016. Among these companies, 1,123 are from mainland China. See Invest Hong Kong (2017), 'Hong Kong: The Regional Business Hub', http://www.investhk.gov.hk/zh-hk/files/2017/03/RHQ-Survey-2016.pdf (accessed 25 Jul. 2017).
[156] Xi Jinping's speech at the meeting to mark Hong Kong's 20th anniversary of its return to China. See Xinhua (2017), 'Full text: Xi's speech at meeting marking HK's 20th return anniversary, inaugural ceremony of 5th-term HKSAR gov't', 1 July 2017, http://news.xinhuanet.com/english/2017-07/01/c_136409940.htm (accessed 14 Aug. 2017).
[157] See, for example, Chan, N. (2016), 'China's Reform and Liberalisation: The Positioning and Future of Hong Kong', Hong Kong Monetary Authority, 27 October 2016, http://www.hkma.gov.hk/eng/key-information/speech-speakers/ntl-chan/20161027-1.shtml (25 Jul. 2017).
[158] European Commission (2017), Trade, http://ec.europa.eu/trade/policy/countries-and-regions/countries/hong-kong-sar/ (accessed 25 Jul. 2017).
[159] HKEX (2016), *Market statistics 2016,* http://www.hkex.com.hk/eng/newsconsul/hkexnews/2017/Documents/1701092news.pdf (accessed 25 Jul. 2017).

EU financial institutions can benefit from Hong Kong's unique advantages. In June 2017, out of 155 licensed banks in Hong Kong 29 were incorporated in the EU,[160] and seven EU banks maintained representative offices in Hong Kong. In the insurance sector, 25 out of 160 insurance companies authorized in Hong Kong were incorporated in the EU.[161] Hong Kong is therefore well positioned to contribute to further EU–China economic cooperation.[162]

A particular example of this relates to the BRI, with Hong Kong exploring actively how it could leverage its global financial connectivity and efficient markets to put together financing deals and enhance risk management.[163] For instance, the Hong Kong Monetary Authority set up an Infrastructure Financing Facilitation Office (IFFO) in July 2016,[164] to expedite such infrastructure investments by bringing together and working with key stakeholders. By July 2017, the IFFO had built a network of over 60 entities from different parts of the world including China, covering multilateral financial agencies and development banks, public and private sector investors, asset managers, infrastructure project sponsors and professional service firms. Many forums have been held for stakeholders to exchange views and collaborate. A reference term sheet for infrastructure investment has been developed through these forums, which seeks 'to devise a set of common language terms that can be understood and accepted by investors, financiers and sponsors, thereby narrowing the gap in their expectations and bringing them closer to doing deals… [and] set[s] out various major factors to be considered for infrastructure investment.'[165]

[160] HKMA Register of Authorized Institutions and Local Representative Offices (2017), 'Contact list of authorized institutions and Local Representative Offices under the Supervision of the HKMA', 23 June 2017, http://vpr.hkma.gov.hk/cgi-bin/vpr/index.pl (accessed 25 Jul. 2017).
[161] Data from Insurance Authority Information Center, http://www.oci.gov.hk/download/ins (accessed 6 Sep. 2017).
[162] For further information on the EU and Hong Kong, see Trade and Industry Department of the Hong Kong Special Administrative Region (2016), *The European Union and Hong Kong: Some Important Facts*, Hong Kong: Trade and Industry Department, https://www.tid.gov.hk/english/aboutus/publications/factsheet/eu.html (accessed 25 Jul. 2017).
[163] Lau, L. J. (2017), 'How Hong Kong can be a key pillar for belt and road infrastructure', *South China Morning Post*, 8 June 2017, http://www.scmp.com/comment/insight-opinion/article/2097338/how-hong-kong-can-be-key-pillar-belt-and-road-infrastructure (accessed 25 Jul. 2017).
[164] For more details on the IFFO see https://www.iffo.org.hk/.
[165] Lee, V. (2017), 'Challenges in Infrastructure Financing, Belt and Road Opportunities, and the HKMA Infrastructure Financing Facilitation Office', speech by Vincent Lee, Deputy Director, IFFO, 7 July 2017, https://iffo.org.hk/news-and-events/speeches/speeches/2017/07/07/aail (accessed 25 Jul. 2017).

8. People-to-People Ties

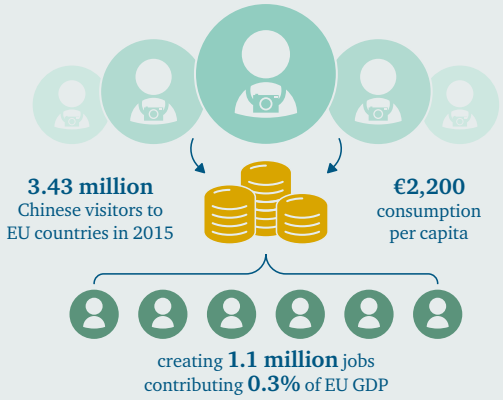
People-to-people exchanges – covering a wide range of interactions including in education, culture, science, healthcare and regular tourism – have increased in absolute scale and in their relative contribution to EU–China interactions (science and technology exchanges are covered in Chapter 6). As the term suggests, most of these people-to-people exchanges are driven by individuals, though governments play a role in regulating and sometimes shaping these, not least through their management of border controls.

Tourism

2018 has been designated by the two sides as the 'China–EU Tourism Year'

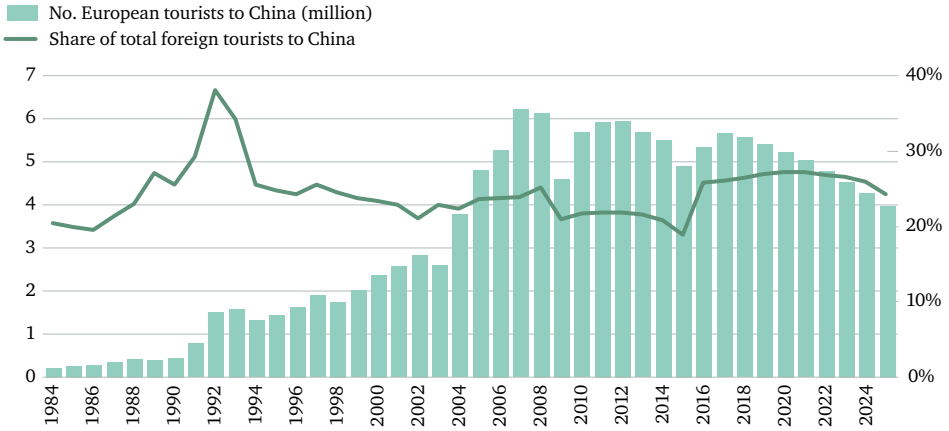
Tourism has grown substantially in both directions and 2018 has been designated by the two sides as the 'China–EU Tourism Year'. The numbers of European tourists to China has grown particularly rapidly since around 2003, but appears to have reached a plateau, and could even decline over the next eight years (Figures 8 and 9). The number of Chinese tourists visiting Europe has grown more recently and is continuing to rise (Figure 10): in 2016, 5.13 million Chinese tourists visited the EU, up from 3.43 million in 2015 and 2.79 million in 2014. In 2015, their consumption per capita reached €2,200 in the EU, contributing 0.3 per cent to GDP and raising employment by 0.6 percentage points, creating around 1.1 million jobs; this could increase to €3,500 in 2020, with a 0.9 per cent contribution to GDP and an increase in employment rate by 2 percentage points.[166] Subject to visa regimes, further growth is to be expected to 2025 given rising Chinese demand for outbound tourism, though recent terrorist incidents in Europe may have diverted some travellers to other destinations. In 2015, all of Europe (not just the EU) accounted for 12.9 per cent of total outbound travel by Chinese.

Tourism between the EU and China has grown substantially.



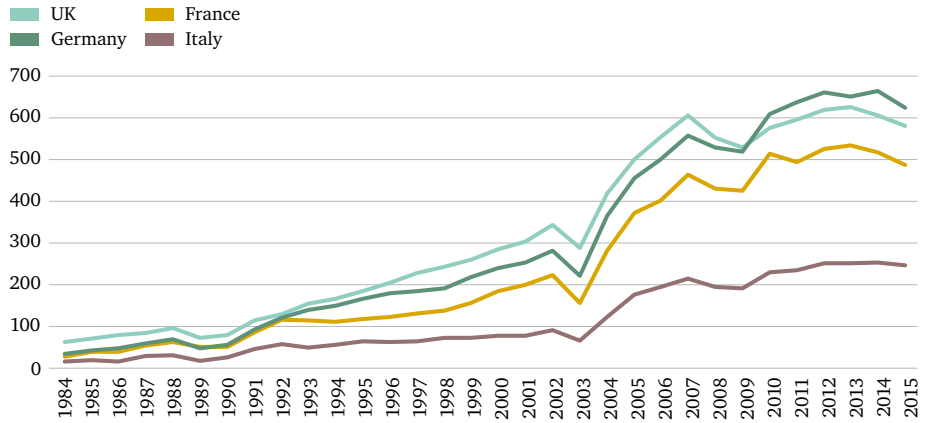
[166] CCIEE calculations based on employment elasticity of about 0.5 in the EU (OECD database), based on data from China National Tourism Administration (2016), 'Foreign visitor arrivals by purpose, Jan-Dec 2015, 18 January 2016, http://www.cnta.gov.cn/zwgk/lysj/201601/t20160118_758408.shtml (accessed 10 Aug. 2017).

Figure 8: Number of European tourists to China



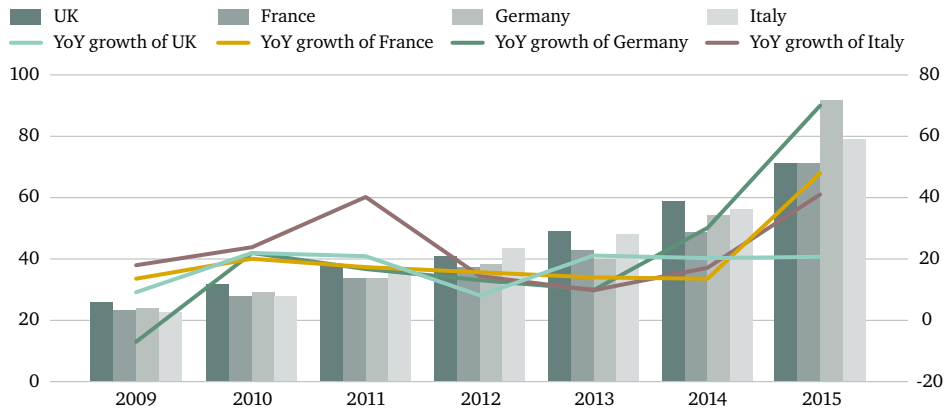
Source: CCIEE, from China Tourism Statistical Yearbook, http://www.cnta.gov.cn/zwgk/lysj/ (accessed 10 Aug. 2017).

Figure 9: Number of European tourists to China by country (thousand)



Source: CCIEE, from China Tourism Statistical Yearbook, http://www.cnta.gov.cn/zwgk/lysj/ (accessed 10 Aug. 2017).

Figure 10: Chinese tourists to Europe by country (thousand)

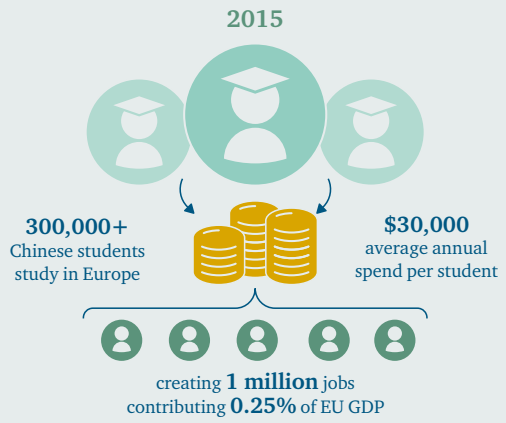


Source: CCIEE, from Statistical bulletin of China's tourism industry, Annual Report of China outbound tourism, http://www.cnta.gov.cn/zwgk/lysj/201609/t20160908_783202.shtml (accessed 10 Aug. 2017).

Cultural and education exchanges

Cultural exchanges have grown in importance within the overall EU–China relationship, becoming a 'third pillar' of the formal relationship in 2012, and reflected in the 'civilizational partnership' proposed by President Xi Jinping in 2014. This proposal highlighted the potential for substantial growth in cultural exchanges: compared to US cultural industries, the EU is relatively weak in China, and there is substantial space for enhancing a range of cultural exchanges.

Chinese students make a significant contribution to Europe's economy.



A key area is education. More than 80 bilateral educational cooperation agreements have been signed between China and EU countries. Over 300,000 Chinese students study in Europe (including 123,000 arrivals in 2015, which accounts for 24 per cent of the total overseas student cohort). On average, these students spend $30,000 per person per year, with a contribution to the EU economy of 0.25 per cent of GDP in 2015, creating about one million jobs.[167] In 2015, 45,000 students from EU countries studied in China (3,000 through Chinese government scholarships).[168] There are 574 cooperative EU educational institutions and projects in China, while China has set up 160 Confucius Institutes in Europe and 293 Confucius Classrooms, with a total enrolment of 620,000 students. All of the EU's 24 official languages are offered at universities in China.[169] Looking out to 2025, CCIEE project that the overall number of Chinese students going overseas to study will not increase, but remain flat at around 500,000 per year.

[167] CCIEE research based on Xinhua EID and Visa (2015), 中国留学生海外消费报告 [Report on the Consumption of Chinese Students Studying Overseas], http://www.igo.cn/2010/news/lxxw/lxdt/2015/08/16/162152.shtml (accessed 31 Aug. 2017).
[168] Of these, 33 per cent are on technical or bachelors programmes, 10 per cent masters, and 4 per cent PhD. Measured simply in dollar terms, annual expenditure of $30,000 by a total of 300,000 Chinese students would amount to total spending of $9 billion a year in the EU. Total expenditure by Chinese tourists in the EU was about $7.2 billion in 2016. The employment impact on the EU of this student/tourist spending should be higher than EU exports to China because the former are more services intensive while the latter is likely to be more capital intensive.
[169] Confucius Institute, http://www.hanban.org/confuciousinstitutes/node_10961.htm (accessed 10 Aug. 2017); Ministry of Education of the People's Republic of China (2016), 中国与欧盟教育交流简况 [The situation relating to educational exchanges between the EU and China], 8 October 2016, http://www.moe.edu.cn/jyb_xwfb/xw_fbh/moe_2069/xwfbh_2016n/xwfb_161008/161008_sfcl/201610/t20161008_283199.html (accessed 10 Aug. 2017). There are also regular dialogue mechanisms with the UK, France, Germany, Italy, Ireland, Finland, etc. and 19 higher-education mutual recognition agreements with France, Germany, Italy, Netherlands, Portugal, etc.

The UK has by far been the most significant destination for Chinese students, accounting for over one-third of the total numbers,[170] and disproportionately features in a number of other areas of education exchanges. This means that after Brexit, the scale of EU–China educational exchanges will reduce substantially. This also highlights the space available for expansion of educational exchanges between the EU27 and China, especially in the provision of international education in Europe. This could be facilitated by greater resources being put into the teaching of European languages in China, and into Chinese in the EU; this is most likely to be through Confucius Institutes, where the EU27 lags behind the US in the number of these institutes (though these should not be the only channel of interaction).

Healthcare cooperation

Cooperation in healthcare between the EU and China goes beyond people-to-people ties to include trade, investment and innovation. At its heart, this will be driven by a combination of changing demographic profiles (such as China's ageing population, with 150 million people over the age of 65 in 2016, and rising), and the extensive experience gap in the provision of healthcare between the EU and China. These create particular opportunities for European healthcare providers in the China market, but require ongoing reforms to be accessible.[171] Healthcare is one of the fastest growing industries in China.

There is an important international public policy healthcare agenda on which the EU and China could work together more

There is also an important international public policy healthcare agenda on which the EU and China could work together more. Recent work on preparing for future epidemics (such as the G7 Independent Expert Group convened and chaired by Bill Gates) has identified a need to strengthen healthcare systems, disease surveillance activities and response systems. In enhancing global preparedness it has identified needs for robust disease surveillance, assessment and response systems across all countries, supported by accurate data; increased funding for research and development; the development of an international public health reserve corps; and that these should be backed up by global leadership and coordination. There are other specific areas for increased cooperation, including tackling anti-microbial resistance by preventing infections to reduce the dependence on antibiotics, bringing innovations into treatments and investing in related research, and ensuring that the wider business and policy environment incentivizes these developments.

Existing EU–China dialogues deal with healthcare cooperation somewhat tangentially – in dialogues on agriculture, consumer product safety, and as part of the broader innovation agenda (see list of EU–China dialogues in Appendix B). There is therefore scope for the EU and China to develop a more focused dialogue on health issues, preferably in coordination with work going on in multilateral institutions.

[170] Data sourced by CCIEE from the China Education Yearbook and UNESCO suggests that the proportion may be as much as a half. For data suggesting the proportion is closer to one-third, see Summers (2017), 'Brexit', p. 13.
[171] According to research by the Credit Suisse Research Institute, assuming total healthcare costs in China reach developed market levels of 10 per cent of GDP and annual GDP growth rates of around 4–5 per cent for the next 15 years, total healthcare spending in China could be $2.3 trillion by 2030. Credit Suisse Research Institute (2017), 'The Chinese Consumer in 2017: The Lifestyle Upgrade', 17 May 2017, https://www.credit-suisse.com/hk/en/about-us/research/research-institute/news-and-videos/articles/news-and-expertise/2017/05/en/the-chinese-consumer-in-2017-the-lifestyle-upgrade.html (accessed 25 Jul. 2017).

Policy implications

As with science, technology and innovation, flexible movement of people is at the heart of developing people-to-people exchanges to the next level. Given the pace of change and the wider immigration pressures on the EU, this process needs to be carefully managed. In China, relative levels of inward migration are low, suggesting there is space for a more proactive policy to encourage those from the EU to spend time in the country.

To facilitate these exchanges, the EU and China could consider targeted reciprocal multi-year and multiple-entry visas, perhaps along the lines of the 10-year multiple entry visas put in place by the US and China. These could be introduced initially in particular fields where the two sides want to encourage deeper relations, such as in areas relating to science and innovation, before extending the scheme more widely. To disseminate the impact of existing exchanges better, the two sides could consider promoting more widely specific examples of positive benefits from people-to-people exchanges.

Other measures should be the development of realistic targets for cultural, scientific and educational exchanges, more resources for language training (especially learning Chinese in Europe), and creative engagement of the Chinese diaspora in Europe.

9. Conclusion

Developing EU–China ties in global governance

Interactions between the EU and China do not take place in isolation across any of these issues, but in the context of the evolution of global governance in each area (taken as the sum of rules, norms and institutions that guide states and other actors) and wider changes to world order.[172] As highlighted in the introduction to this report, these include changes emanating from the US, as well as developments within the EU, the continued rise of China and other emerging economies, and the changing nature and importance of non-traditional security threats, from terrorism and climate change to infectious diseases. The last decade has been a time of dislocating change at the global level, and many of these trends look set to continue to 2025 and beyond. In response, as their leaders have recently stated,[173] the EU and China can work together to facilitate a greater openness in assessing threats and opportunities and greater cooperation in undertaking the necessary responses.

The identification of common interests in promoting effective multilateralism, as well as the lack of any direct strategic or security conflicts between the EU and China, have long been cited as reasons for the two parties to work more closely together as strategic partners, including in global governance. This congruence of interests and approaches should indeed be a key driver for the development of the relationship. However, as noted in the introduction, achieving the sort of strategic partnership envisaged at times by European and Chinese leaders has proved difficult. This is partly because of the triangular relationship with the US, which has been sceptical about the EU and China coming too close together. But the challenges have also been due to differences between the EU and China in terms of priorities, values, domestic economic models, and more detailed visions of world order, and where power should rest in that order, which go beyond a broad agreement on the importance of multilateralism. Historically, EU–US cooperation in global governance has been easier for the EU than working with China.

Some specific examples demonstrate this change. In the aftermath of the global financial crisis, both the EU and China welcomed the emergence of the G20 as the 'premier' forum for discussing global economic governance. Both were willing to promote reform, and had some 'common core ideas relating to prudential regulation of financial markets and toleration of (degrees of) moderate government intervention in economic governance'.[174] As then European Commission President Barroso put it, 'the G20 gives us the chance to shape globalization [and] to develop a sustainable model to replace the one brought to its knees by the failure of financial markets'.[175] However, this was not translated into an ability to shape the G20 agenda on international financial regulation and international financial institutions, due to a lack of cohesion between EU member states, different pressing concerns between the EU and China,[176] and damage to the EU's credibility from the European debt crisis.

[172] Chen, D. (2017), *Economic Crisis and Rule Reconstruction*, Singapore: World Scientific; Demertzis, M., Sapir, A. and Wolff, G. (2017), 'Europe in a New World Order', Bruegel policy brief, February 2017, http://bruegel.org/wp-content/uploads/2017/02/Bruegel_Policy_Brief-2017_02-170217_final.pdf (accessed 25 Jul. 2017); Niblett, R. (2017), 'Liberalism in Retreat', pp. 17–24.
[173] European External Action Service (2017), 'Remarks by the High Representative Mogherini following the 7th EU-China Strategic Dialogue', 19 April 2017, https://eeas.europa.eu/headquarters/headquarters-homepage/24821/remarks-high-representative-mogherini-following-7th-eu-china-strategic-dialogue_en (accessed 25 Jul. 2017).
[174] Liu, H. and Breslin, S. (2016), 'Shaping the Agenda Jointly? China and the EU in the G20', in Wang and Song (eds.) (2016), *China, the European Union and the International Politics of Global Governance*, p. 96.
[175] Cited in Liu and Breslin (2016), 'Shaping the Agenda Jointly? China and the EU in the G20', p. 100.
[176] Including on the transfer of voting rights in international financial institutions: China's gain in voting rights in the IMF effectively reduced the share of countries in Europe rather than that of the US.

In the WTO, both the EU and China have adopted the dispute resolution mechanism to strengthen the international rule of law and the rules-based governance of global trade, though some argue that there are issues to be addressed over equality between original members of the WTO and acceding countries.[177]

Common goals: sustaining the multilateral system

As noted in the introduction, the EU and China have much in common. They are two of the most externally integrated global economies. Both face a changing global environment where continued openness cannot be taken for granted. There is much overlap in terms of fundamental strategic outlook, including on the desire for effective multilateralism to be at the heart of global governance. The two are not strategic competitors.

In the more recent context of scepticism about US approaches to a rules-based multilateral global order, the incentives for EU–China collaboration across aspects of global governance have changed. As EU High Representative and European Commission Vice-President Federica Mogherini suggested on her April 2017 visit to Beijing for the EU–China Strategic Dialogue, the EU and China as global powers 'have a joint responsibility to work together towards a more cooperative, rules-based global order'.[178]

EU–China cooperation should not be seen as an end in itself, but as a stepping stone to wider global governance cooperation and reform

The changing nature of this multilateral system is dependent not only on the approach of the US, but reflects structural shifts in the distribution of political and economic power. As a recent report by Bruegel scholars puts it, the world is 'evolving from a multilateral system centred around the US into a more multipolar system resting on the three strong trading poles of China, the EU and the US, each with several bilateral and regional trading arrangements'[179] – the authors go on to note that this has been criticized as undermining existing multilateral frameworks, and all of the major players are engaging not just with multilateral institutions, but plurilaterally, regionally and bilaterally.

As a result, EU–China cooperation in global governance cannot be neatly reduced to support for effective multilateralism. Instead, this can be improved by a pragmatic approach based on deliberations over the most effective means of boosting open and rules-based global governance in different areas, prioritizing those where interests are more clearly aligned over the next five to 10 years.

The EU and China will face a continued challenge in how to deal with the broader global context, and in particular with the US. EU–China cooperation should not be seen as an end in itself, but as a stepping stone to wider global governance cooperation and reform. This has to include working with the US, which will remain the EU's main strategic global partner for some time.[180] It will also remain an influential player in global governance, whatever the approach of the current administration. The strategic goal of the EU and China should be to move closer together in response to US uncertainty, while reinforcing strong dialogue and cooperation

[177] Burnay, M. and Wouters, J. (2016), 'The EU and China in the WTO: What Contribution to the International Rule of Law? Reflections in Light of the *Raw Materials* and *Rare Earths* Disputes', in Wang and Song (eds.) (2016), *China, the European Union and the International Politics of Global Governance*, chapter 6, pp. 126–128.
[178] European External Action Service (2017), 'EU-China cooperation "has never been so important" – Mogherini', 19 April 2017, https://eeas.europa.eu/delegations/china/24823/eu-—-china-cooperation-has-never-been-so-important-mogherini_en (accessed 25 Jul. 2017).
[179] Demertzis, Sapir and Wolff (2017), 'Europe in a New World Order', p. 6.
[180] Europeans would also face challenges in responding to any deterioration in US–China relations in the Asia-Pacific region, for example over maritime disputes in the East or South China seas. The potential for different US and European responses was brought out in a scenario conducted at Chatham House; see Wickett, X. and Parakilas, J. (2016), 'Transatlantic Rifts: Asia-Pacific Scenario Case Study', Research Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/publication/transatlantic-rifts-asia-pacific-scenario-case-study (accessed 25 Jul. 2017).

with the US – exploring again the potential for trilateral discussions at both the governmental and track two levels. This can be seen either as a challenging hedging operation, or in more optimistic terms, as a realistic way to rebuild platforms for future global governance cooperation, by reinforcing partnerships between China, the EU and major emerging economies. It is based on the realization that the multilateral system cannot be sustained and developed without working with the US – and other global powers – as much as possible.

Furthermore, the benefits of a closer EU–China relationship are likely to be enhanced if the EU27 and the UK are able to agree a sensible Brexit that ensures a continued close economic relationship between them. All three economies have a mutual self-interest in seeing a constructive outcome from the Brexit negotiations between the EU27 and the UK.

Finally, bilateral coordination between the EU and China on issues relevant to global governance, from deeper trade relations and financial cooperation to climate change policies, must be leveraged through and contribute to the strengthening of the G20, the WTO, the UN and other appropriate multilateral bodies. This will ensure that the benefits of this deeper bilateral cooperation can achieve their full potential and be sustainable over time.

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We would also like to thank the authors of the sub-papers published by each of the partner institutes as part of the project. The full list of publications and authors can be found in Appendix A.

About the Authors

Alicia García-Herrero is a senior fellow at Bruegel and a non-resident research fellow at Real Instituto El Cano. She is also the chief economist for the Asia-Pacific region at Natixis. She is currently adjunct professor at Hong Kong University of Science and Technology (HKUST). Previously, Alicia held senior positions at Banco Bilbao Vizcaya Argentaria (BBVA), the Bank for International Settlements (BIS), the Bank of Spain, the European Central Bank, Banco Santander and the International Monetary Fund. Alicia holds a PhD in economics from George Washington University and has published extensively in peer-reviewed journals and books.

K. C. Kwok was the government economist of the Hong Kong Special Administrative Region (2004–08) and the regional chief economist for Asia at Standard Chartered Bank (1991–2004). He is now an honorary senior research fellow of the School of Economics and Finance at the University of Hong Kong, and a non-executive director of DBS Bank (HK) Ltd. and SUNeVision Holdings Ltd. He serves on various boards and committees in Hong Kong, including the Hong Kong Competition Commission.

Liu Xiangdong is a senior fellow at CCIEE, where he works on the Chinese economy, industrial economy, and international relations. Previously, during his time at CCIEE, he held the position of visiting scholar at the Institute of Energy Economics (IEEJ) in Japan (2012–13). He has widely published academic and policy research articles. His current research projects include an analysis of the Chinese economy's prospects, China–Japan–South Korea economic relations, and EU–China economic relations. Liu Xiangdong holds a PhD in business management from Guanghua Management School of Peking University and has published extensively in peer-reviewed journals.

Tim Summers is a senior consulting fellow for the Asia programme at Chatham House and teaches at the Centre for China Studies, the Chinese University of Hong Kong (CUHK). His research papers for Chatham House include *China's Global Personality* (2014), *The Asia-Pacific Power Balance: Beyond the US–China Narrative* (2015, with Xenia Wickett and John Nilsson-Wright), and a chapter on Hong Kong in *The Critical Transition: China's Priorities for 2021* (2017). Other recent publications include articles on China's Belt and Road Initiative, or 'new silk roads' (Third World Quarterly), China's maritime disputes (China Information), British policy on Hong Kong (Issues and Studies), and his first book, *Yunnan – A Chinese Bridgehead to Asia* (Chandos, 2013). He was previously a British diplomat for 13 years, culminating in a posting as consul-general in Chongqing, southwest China, from 2004 to 2007. He holds a PhD in Chinese studies from CUHK, and is based in Hong Kong.

Zhang Yansheng is currently fellow of the academic committee of the National Development and Reform Commission (NDRC) and chief researcher at CCIEE. He is also a part-time professor at Peking University, Renmin University of China, and Huazhong University of Science and Technology. He has widely published books and academic papers in both Chinese and English. He has won many awards for his work including the Sun Yefang Prize in Economics, the 1977–1991 Outstanding Works Prize of the Chinese Academy of Social Sciences (CASS), and first prize for Outstanding Research Achievement of National Development and Reform Commission (Science and Technology Progress Award). He also presided over the 9th collective study session of the Political Bureau of the CPC Central Committee in 2008.

Appendix A: EU–China 2025: Project Background

This project was motivated by the rapidly expanding scale and intensity of the economic relationship between the EU and China. This has been reflected in the growth of bilateral trade and investment, and the development of ties across financial services, science, technology and innovation, energy and climate change, and people-to-people ties, as well as recent initiatives in infrastructure investment and connectivity, and interactions across various aspects of global governance.

On 3 February 2016, four policy institutes – Bruegel, the China Center for International Economic Exchanges (CCIEE), the Institute of Global Economics and Finance at The Chinese University of Hong Kong, and Chatham House – signed a memorandum of understanding to conduct a joint project on 'EU–China 2025'.

The institutes agreed to host joint workshops, conduct research and publish papers – individually and collaboratively – to explore particular aspects of EU–China economic relations to 2025. They further agreed to produce a co-authored final report, taking stock of current economic relations between China and the EU, and identifying trends and potential areas of economic cooperation and collaboration over the period to 2025.

A Senior Advisory Group (SAG) of up to 30 members from both China and the EU was established to give intellectual and policy guidance to the project, as well as facilitate dissemination of the findings among the various policy communities. The SAG met in Hong Kong on 8 July 2017 to discuss the project's final report.

During the project, workshops were held in Brussels (21–22 June 2016), Beijing (22–23 September 2016), and London (9–10 February 2017).

The following papers were prepared by authors from the four institutes in the course of the project:

- Demertzis, M., Sapir, A. and Wolff, G. (2017), 'Europe in a New World Order', Policy Brief, Bruegel, http://bruegel.org/2017/02/europe-in-a-new-world-order/.
- Chen, X., Yang, C., Jiang, X., Kong, Y., and Li, X. (2017), 'Re-estimation of China–EU Trade Balance in 2016', CCIEE (unpublished paper).[181]
- Dou, Y. (2017), 'Comprehensively Deepen EU–China Industrial Cooperation', CCIEE (unpublished paper).
- García-Herrero, A. and Xu, J. (2016), 'China's Belt and Road initiative: can Europe expect trade gains?', Working Paper, Bruegel, http://bruegel.org/2016/09/chinas-belt-and-road-initiative-can-europe-expect-trade-gains/.
- García-Herrero, A. and Xu, J. (2016), 'What consequences would a post-Brexit China-UK trade deal have for the EU?', Policy Contribution, Bruegel, http://bruegel.org/2016/10/what-consequences-would-a-post-brexit-china-uk-trade-deal-have-for-the-eu/.

[181] The unpublished papers from CCIEE listed here were prepared for a roundtable on *EU–China Economic Relations: Looking to 2025* at Chatham House, 9–10 February 2017.

- García-Herrero, A. and Xu, J. (2016), 'UK-China agreement on trade in services in no substitute for a UK-EU deal', Blog post, Bruegel, http://bruegel.org/2016/12/uk-china-agreement-on-trade-in-services-is-no-substitute-for-a-uk-eu-deal/.
- García-Herrero, A. and Xu, J. (2017), 'How to handle state-owned enterprises in EU-China investment talks', Policy Contribution, Bruegel, http://bruegel.org/reader/state-owned-enterprises-in-EU-China#.
- García-Herrero, A. (2017), 'China's rising leverage is a growing risk', Opinion, Bruegel, http://bruegel.org/2017/05/chinas-rising-leverage-is-a-growing-risk/.
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- Lau, L. J. (2016), 'EU-China: Towards a Strategic Relationship', http://www.igef.cuhk.edu.hk/igef_media/people/lawrencelau/presentations/english/160906.pdf.
- Li, F. (2017), 'A Study on the Strategic Connection between "The Belt and Road Initiative" and "Juncker Plan"', CCIEE (unpublished paper).
- Lu, X. (2017), 'Strengthening the EU-China Financial Cooperation', CCIEE (unpublished paper).
- Lu, X., Li, D., and Liu, X. (2017), 'China-EU Relations 2025: Deepening the China-EU Economic and Trade Cooperation During a Period of Uncertainty', CCIEE (unpublished paper).
- Sapir, A., and Summers, T. (2016), 'EU–China: taking stock of the economic and commercial relationship', Bruegel and Chatham House unpublished paper prepared in the first phase of the EU–China 2025 project.
- Summers, T. (2017), 'Brexit: Implications for EU–China Relations', Research Paper, London: Royal Institute of International Affairs, https://www.chathamhouse.org/publication/brexit-implications-eu-china-relations.
- Wan, H. and Shen, M. (2017), 'The Present State and Trend of People to People Ties Between China and the EU', CCIEE (unpublished paper).
- Zhang, H. (2017), 'China and the EU Enhanced Cooperation in the Global Governance Reform', CCIEE (unpublished paper).
- Zhang, Y. (2017), 'EU-China relations in the Era of Global Uncertainty', CCIEE (unpublished paper).
- Zhang, Z, Li, D. (2017), 'Analysis on the Influence of Building the EU-China FTA', CCIEE (unpublished paper).
- Veron, N. (2016), 'Financial regulation: The G20's missing Chinese dream', Policy Contribution, Bruegel, http://bruegel.org/2016/10/financial-regulation-the-g20s-missing-chinese-dream/.

- Veugelers, R. (2017), 'The challenge of China's rise as a science and technology powerhouse', Policy Contribution, Bruegel, http://bruegel.org/2017/07/the-challenge-of-chinas-rise-as-a-science-and-technology-powerhouse/.
- Zachmann, G. (2017), 'The Carbon Buyers' Club: International Emissions Trading Beyond Paris', Policy Brief, Bruegel, http://bruegel.org/wp-content/uploads/2017/04/PB-2017_03-280317.pdf.

Appendix B: EU–China Background

Figure 11: EU–China summits

- 1st: London, April 1998
- 2nd: Beijing, December 1998
- 3rd: Beijing, October 2000
- 4th: Brussels, September 2001
- 5th: Copenhagen, September 2002
- 6th: Beijing, October 2003
- 7th: The Hague, December 2004
- 8th: Beijing, September 2005
- 9th: Helsinki, September 2006
- 10th: Beijing, November 2007
- 11th: Cancelled in 2008 over an arranged meeting between the then French President Sarkozy (France was holding the EU Presidency) and the Dalai Lama during the same period as the scheduled summit in Lyon.[182]
- 12th: Nanjing, November 2009
- 13th: Brussels, October 2010
- 14th: Beijing, February 2012. Postponed from October 2011 to early 2012 due to emergency meetings on the eurozone crisis. This did not directly affect the partnership.[183]
- 15th: Brussels, September 2012
- 16th: Beijing, November 2013
- 17th: Brussels, June 2015
- 18th: Beijing, July 2016
- 19th: Brussels, June 2017

Figure 12: EU communications and policy papers on China

- 'A long-term policy for China–Europe Relations' (1995)
- 'Building a comprehensive partnership with China' (1998)
- 'EU strategy towards China: implementation of the 1998 communication and future steps for a more effective EU policy' (2001)
- 'China country strategy paper, 2002–06' (2002)
- Policy paper on 'A maturing partnership: shared interests and challenges in EU–China relations' (2003)
- 'EU–China: closer partners, growing responsibilities' and 'Competition and partnership: a policy for EU–China trade and investment' (communication and trade policy paper respectively, issued together in October 2006)
- 'EU–China 2020 Strategic Agenda for Cooperation' (2013, joint document)
- 'Elements for a new EU strategy on China' (June 2016)

[182] Traynor, I. (2008), 'China cancels EU summit over Dalai Lama visit', *The Guardian,* 27 November 2008, http://www.theguardian.com/world/2008/nov/27/china-dalai-lama-nicholas-sarkozy (accessed 2 Aug. 2017).
[183] Pan, Z. (2012) 'After the China-EU summit: reaffirming a comprehensive strategic partnership', *Fride,* Policy brief, 3 April 2012, http://fride.org/descarga/PB_3_China_EU_Summit.pdf (accessed 2 Aug. 2017).

Figure 13: EU–China dialogues

- **Agricultural dialogue:** Joint declaration signed in July 2005. The aim was to promote bilateral cooperation and facilitate communication. Two-day session in Brussels in October 2006 – enabled Directorate General for Agriculture, Trade and Health to speak with their Chinese counterparts.
- **Civil aviation:** Start of negotiations in 2005 on China–EU civil aviation relations, in particular with regard to an agreement on bringing bilateral agreements in line with Community law. Cooperation project financed by the European Commission (EC) and European and Chinese industry 2005–06. EU–China Aviation Summit organized by the EC and Civil Aviation Administration of China (CAAC) in 2005 in Beijing.
- **Competition policy:** EU–China agreement on permanent mechanism for consultation in this area signed in May 2004. The aim was to enhance the EU's technical and capacity-building assistance to China. This brings the Chinese competition system in line with the 'European model'.
- **Consumer product safety:**[184] MoU agreed between DG Health and Consumer Protection (DG SANCO) and General Administration of Quality Supervision, Inspection and Quarantine in 2006, with upgrades in 2008, leading to the establishment of a working group. A further upgrade was agreed in 2010 during the Shanghai World Expo. In 2006 the Rapid Alert System for non-food consumer product (RAPEX) was established.
- **Customs cooperation:** EU–China customs cooperation agreement signed in 2004, leading to the Joint Customs Cooperation Committee as a forum for customs cooperation between the EU and China. A renewed agreement came into force in November 2015. Re-admission and visa facilitation schemes also signed in 2004.
- **Tourism:** Agreement reached in 2004 that the EU would enjoy 'approved destination status' for Chinese tour groups.
- **Education and culture:** There have been mutual benefits since the start of the Erasmus Mundus Programme in 2004. EU–China High Level People-to-People Dialogue (HPPD) is the third pillar of EU–China relations. Since the launch of the initiative, there have been a series of meetings and talks between April 2012 and September 2014 on education, culture and language.
- **Employment and social affairs:** In 2005 an MoU was agreed on EU–China cooperation on labour, employment and social affairs. Meetings are held at least once a year, alternating between Brussels and Beijing. The first meeting, 'Employment Promotion and Vocational Training', took place the day after the MoU was signed. The second event, 'Labour Mobility in the EU and China', took place in November 2006 in Brussels. Launch of the five-year EU–China Social Security Reform Cooperation Project on 1 April 2006.
- **Energy (including nuclear energy):** EU–China energy dialogue was established in 1994 in the form of annual working group meetings and a biannual conference on EU–China energy cooperation. In 2005, an MoU on transport and energy strategies was concluded at the 8th EU–China Summit. DG TREN (Transport and Energy) and the Chinese Ministry of Science and Technology (MOST) signed an action plan on clean coal and the terms of reference for an action plan on industrial cooperation on energy efficiency and renewable energies. Both parties signed a EURATOM Agreement in April 2008.

[184] European Commission (undated), Bilateral Cooperation, http://ec.europa.eu/consumers/consumers_safety/international_cooperation/bilateral_cooperation/index_en.htm (accessed 2 Aug. 2017).

- **Environment:** Joint EU–China Declaration on Climate Change and Partnership adopted at the September 2005 summit. MoU signed in Shanghai in February 2006 starting a project aimed at building a zero-emission coal-fired power plant in China before 2020. Large increase in number of contracts since 2000, between the EC and the Chinese State Environmental Protection Agency (SEPA), the dialogue has been upgraded to ministerial level since 2003.
- **Food safety – sanitary and phytosanitary issues:** Joint technical group established in 2002. MoU between DG SANCO and AQSIQ aiming at enhancing cooperation and creating better communication between the responsible authorities.
- **Global satellite navigation services:** In 2003 a cooperation agreement was signed, which included China in the European GALILEO programme, under which China has invested €65 million. A follow up agreement between the Chinese Remote Sensing Centre and the Galileo Joint Undertaking was signed in October 2004. However, partly following pressure from the US, European policymakers decided in the summer of 2008 to put an end to satellite navigation cooperation with China, and prevented Chinese participation in tenders for the second phase of the Galileo system. Other cooperation in space programmes has continued.
- **Human rights:**[185] Dialogue on human rights issues began in 1996 and, in the same year, both parties participated in the first Asia–Europe Meeting (ASEM). EU–China high-level consultations on fighting illegal migration and trafficking in human beings started in 2000. The EU–China Human Rights Dialogue takes place biannually. The EC also supports human rights seminars for European and Chinese experts. One example is the EU–China Legal and Judicial Cooperation Programme, aimed at strengthening the rule of law in China.
- **Information society:** Dialogue started in 1997 with the aim to promote collaboration between European and Chinese research teams. Projects since then have included the China–EU Information Society Project and the EU–China Trade Project.
- **Intellectual property rights:** An agreement was signed in October 2003. EC has financed a key IPR technical cooperation programme.
- **Macroeconomic policy and the regulation of financial markets:** EU–China dialogue on macroeconomic and financial regulatory issues launched in 2004 at the 7th EU–China summit. First meeting took place in Brussels in February 2005, the second was held in Beijing in May 2006.
- **Maritime transport:** A maritime agreement was signed between the EU and China in 2002 to improve conditions for maritime transport. Annual monitoring of the implementation of the agreement takes place alternately in China and the EU.
- **Regional policy:**[186] The first China–EU Regional Policy Seminar took place in Beijing in May 2006 after an MoU was agreed with the Chinese National Development and Reform Commission. These high-level seminars were held on a yearly basis alternating between China and Brussels until 2013. In 2010, the EC launched a training programme, 'Chinese European Training Series on Regional Policy', which takes place in at least three member state countries for a two-week period.

[185] Delegation of the European Union to China (undated), 'Human Rights Dialogue', http://eeas.europa.eu/delegations/china/eu_china/political_relations/humain_rights_dialogue/index_en.htm (accessed 2 Aug. 2017).
[186] European Commission (undated), EU-China, http://ec.europa.eu/regional_policy/en/policy/cooperation/international/china/ (2 Aug. 2017).

- **Regulatory and industrial policy:** Dialogue on industrial policy and regulation was established through the signing of an agreement in October 2003 at the 6th EU–China summit.
- **Science and technology:** An agreement on science and technology signed in 1998, came into force in 1999 and was renewed in 2004. Two years later, 2006 was designated the EU–China Science and Technology Year, which saw the Chinese Ministry of Science and Technology host four China–EU science and technology cooperation forums. Another cooperation forum was held in Brussels in April 2015.
- **Space cooperation:** High-level meetings in July 2006 assessed how to implement a dialogue on space science, applications and technology among parties concerned. Throughout 2014 and 2015, a series of workshops have taken place in China to plan a joint scientific space mission between the Chinese Academy of Sciences and the European Space Agency, with the launch aimed for 2021.[187]
- **Trade policy dialogue:** The High Level Economic and Trade Dialogue (HED) was launched in November 2007 at the 10th EU–China Summit. These meetings take place every two years, with the 5th and latest HED having occurred in Beijing in September 2015.
- **Textile trade dialogue:** Dialogue began in 2004 (though the first agreement on textile trade had been signed in 1979).
- **Transport:** MoU on transport and energy strategies signed in 2005 with the Chinese National Development and Reform Commission.
- **Horizon 2020:**[188] This is a major EU Research and Innovation Programme with nearly €80 billion of funding for the period 2014–20. China can benefit from Horizon 2020 through the following of thematic areas: food, agriculture and biotechnology; sustainable urbanization; energy; aeronautics; ICT; water; health; society; polar research; small and medium-sized enterprises; and space.[189]

Source: European External Action Service website, in particular European Commission (2015), EU-China Dialogue Architecture, https://eeas.europa.eu/sites/eeas/files/2015_november_eu-china_dialogue_architecture.jpg (accessed 16 Aug. 2017).

Figure 14: The European Union Chamber of Commerce in China, observations on outline 13th Five-Year Programme

Innovation

- Fostering an innovative environment by encouraging R&D in the private sector and through nationality-blind policy.
- Improvement of the enforcement of China's laws on the protection of intellectual property rights.

[187] ESA (2014), Planning for a joint scientific space mission: An initiative of the European space agency and the Chinese Academy of Sciences, 25–26 February 2014, http://sci.esa.int/cosmic-vision/53072-esa-and-cas-planning-for-a-joint-mission/ (accessed 2 Aug. 2017); Wall, M. (2015), China and Europe Will Team Up for Robotic Space Mission, Space.com, http://www.space.com/28331-china-europe-space-mission.html (accessed 2 Aug. 2017).
[188] European Commission (undated), What is Horizon 2020?, https://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020 (accessed 2 Aug. 2017).
[189] European Commission (undated), Horizon 2020: Calls and Topics Targeting China, https://ec.europa.eu/programmes/horizon2020/sites/horizon2020/files/List%20of%20calls%20targeting%20China%20in%20Horizon%202020%20work%20programme%20for%202014%20and%202015_2.pdf (accessed 2 Aug. 2017).

- Accelerating reform of the financial system through liberalization of interest rates, boosting market-based lending and further opening up of related sectors.
- Limiting state engagement in the economy by allowing market forces to determine prices of factors of production, reducing reliance on subsidies, and reforming state-owned enterprises.

Coordinated development

- Concern that much of the new legislation in China on the cyber environment and national security goes beyond essential national security concerns, and contains vague and broad definitions, with the result that this could constrain legitimate market access by allowing the authorities to impose regulations barring foreign companies from government tenders.
- Chinese laws to be more aligned with the OECD 'guidelines for recipient country investment policies relating to national security'.

Green development

- Welcome for the revised Environmental Protection Law, which came into force on 1 January 2015.

Open development

- Increasing market access for the private sector, including foreign companies, many of which 'still face market access barriers to doing business in China'.
- Notes that the OECD identifies China as the G20 country with the most restrictive foreign investment regime: continued differentiation between foreign-invested and domestic enterprises, with conditionality for the former in some cases (e.g. mandated technology transfer to JV partners) – the paper particularly highlights rail, construction, environment and public procurement.
- Abolishment of the foreign investment catalogue and rolling out of the 'negative list' approach in China (this was piloted first in the Shanghai Free Trade Zone).

Shared development

- Suggestions for the development of China's healthcare system.

Source: European Chamber (2016), Comments on Suggestions of the CPC Central Committee on Drafting the 13th Five-Year Plan of the National Economic and Social Development, http://www.europeanchamber.com.cn/en/lobby-actions/1257/Comments_on_Suggestions_of_the_CPC_Central_Committee_on_Drafting_the_13th_Five_Year_Plan_of_the_National_Economic_and_Social_Development (accessed 2 Aug. 2017).

Appendix C: Economic Growth Projections

Table 6: Projections of China's economic growth (constant 2016 $)

	Scenario 1		Scenario 2	
	Real GDP growth rate (%)	GDP ($ trillion)	Real GDP growth rate (%)	GDP ($ trillion)
2016	6.7	11.21	6.7	11.21
2017	6.6	11.46	6.5	11.45
2018	6.5	11.90	6.3	11.87
2019	6.5	12.67	6.1	12.59
2020	6.5	13.31	6.0	13.16
2021	6.3	14.15	6.0	13.95
2022	6.2	15.02	6.0	14.78
2023	6.1	16.16	5.9	15.88
2024	6.1	17.15	5.9	16.82
2025	6.1	18.46	5.7	18.03

Source: CCIEE calculations.

Table 7: Projections of EU27's economic growth (constant 2016 $)

	Scenario 1		Scenario 2	
	Real GDP growth rate (%)	GDP ($ trillion)	Real GDP growth rate (%)	GDP ($ trillion)
2016	1.9	13.87	1.9	13.87
2017	1.8	14.12	1.7	14.10
2018	1.8	14.38	1.7	14.34
2019	1.8	14.63	1.7	14.58
2020	1.7	14.88	1.6	14.82
2021	1.7	15.14	1.6	15.06
2022	1.7	15.39	1.6	15.30
2023	1.7	15.66	1.6	15.54
2024	1.7	16.11	1.6	15.98
2025	1.7	16.58	1.6	16.43

Source: CCIEE calculations.

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