Looking Outward: Western Disarray, China Rising

4.1 INTRODUCTION

While the European Union is struggling internally with growing divergence among member states regarding both their economic performance and their support of common governance structures, the international environment is changing rapidly creating new challenges. The two most important developments in the international environment are the shift in US economic policy towards protectionism and against NATO, and the rise of China. The changes in the international environment are linked to the internal challenges faced by the European Union because these changes affect different EU member states differently; and may potentially exacerbate existing divergences and tensions.

The United States has become an unreliable trading partner and strategic ally, with Donald Trump undermining NATO, unilaterally pulling the United States out of the 2015 nuclear treaty with Iran, pressuring the European Union on its military spending, trade, and tariffs, imposing tariffs on steel, aluminium and automobiles, and making overtures to Russia's Vladimir Putin and North Korea's Kim Jong Un.

The growth in the Chinese economy has generated new markets for European exports and sources of imports. China is presenting itself as a defender of multilateralism and a rules-based international order, while the United States is retreating into mercantilism, bilateral deals, and tariff wars. At the same time, Europe has got caught in the crossfire of the escalating US-China tariff war. China's growing economic and political prominence and international assertiveness follows on from its 'Belt and Road' initiative and formation of the AIIB (the Asia Infrastructure and Investment Bank) at the end of 2015. The 'Belt and Road' project provides lavish funding for infrastructure investments in European, Asian, and African countries, but the conditions attached to their financing, ownership, and control raised questions and problems. Chinese efforts to establish control over most of the South China Sea, contested by other countries in the region and world powers, raise tensions and pose the risk of military confrontations in the area.

Next to the United States and China, there are other countries that require the attention of the European Union. The United Kingdom will soon be an external country. The extent to which it will be a constructive partner and ally will depend on how Brexit is managed and whether there will be a cooperative agreement.

Russia presents a menacing face. On the one hand it has significant trade links with the European Union, and is an important source of natural gas to Germany partly using pipelines through the Ukraine, and partly using the controversial Nord Stream pipelines via the Baltic. On the other hand, there are growing fears of military intervention in the Baltic States following Russia's activities in eastern Ukraine, the annexation of the Crimea, its persistent military provocations in the Baltic, and interference in democratic elections in the United States and elsewhere. Russia has supported Assad's position in Syria, and is ready to help Iran as US sanctions create pressure. It has welcomed the authoritarian drift of Victor Orban's Hungary, has been ready to exploit Greece's difficulties under the bailouts of the Troika, and will now offer support to Turkey, which is on the receiving end of US sanctions, has suffered a substantial fall in the value of its currency and is still facing the possibility of a financial crisis.

Japan meanwhile, continues to sustain the multilateral trading system. The United States pulled out of the Trans Pacific Partnership in January 2017, a move that was widely thought to have killed off the whole agreement at the time. Nevertheless, Japan and the other ten participants continued negotiations, and signed a new agreement – the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (the CPTPP) – in March 2018. Japan and the European Union signed an agreement on trade in July 2018.

In this chapter we will discuss the implications of changes in the global environment for the European Union. We will focus on the rise of China. While economic and political relations with the United States are called into question by the administration, the critical issues are clearly defined – conflicts are mostly about defence efforts and trade. The implications of the rise of China for Europe and the European Union are less clear. The presence of China as a foreign investor, as a leading actor in science and technology, and as a geopolitical power is growing rapidly; and the debate about the implications for Europe is evolving fast.

The setup of this chapter is as follows: Section 4.2 discusses the changing role of the United States under President Donald Trump and the impact of Brexit. Section 4.3 turns to the rise of China as a global economic factor. Section 4.4 discusses the impact of China's rise on Europe. Section 4.5 discusses policy implications of changes in the international environment for Europe and the European Union, while Section 4.6 offers some conclusions.

EEAG (2019), "Looking Outward: Western Disarray, China Rising",
EEAG Report on the European Economy, CESifo, Munich, pp. 77–94.

4.2 DESTABILISING FORCES: PRESSURES FROM THE UNITED STATES AND BREXIT

4.2.1 US Destabilisation

Donald Trump has been fixated on US trade balances with individual countries. Moreover, he has focused on the balance of trade in goods, ignoring services and primary incomes, where the United States tends to have bigger surpluses; and indeed in some cases he has focused on the balance of trade in particular goods, such as the US balance in automobiles with Germany.[1] It seems that, in his mind, trade is a zero-sum game: one side gains, the other loses. This argument appeals to his supporters in the United States who share this view. Imports represent foreign countries taking jobs away from the United States. Surpluses are good, deficits bad. (This is diametrically opposed to Valéry Giscard d'Estaing's complaint in the 1960s that America's trade deficits, financed by printing dollars, which the rest of the world stored as foreign exchange reserves, represented exploitation of its 'exorbitant privilege' as the supplier of the international means of payment. The world produced goods using labour and capital, for which the United States paid by printing dollars at zero cost.) The Trumpian analysis of trade ignores the fact that the US unemployment rate is currently at its lowest for many years; discouraged workers are coming back into the labour force, and the participation rate is increasing.

Trump has launched a tariff war on China. At the same time, he has complained loudly about the EU's trade surplus with the United States, highlighting Germany's trade surpluses, and particularly Germany's trade surplus in automobiles.

US tariffs on steel (at 25 percent) and aluminium (10 percent) were imposed at the end of May 2018 using a section of US trade laws dating from the cold war era, namely Section 232 of the Trade Expansion Act 1962 that was intended to prevent dependence for strategic supplies on Communist enemies. These tariffs have hit imports from Canada, Mexico, Japan, and European countries, who are US allies, rather than Russia or China, from whom the United States buys relatively little steel, as anti-dumping duties have already reduced imports from these countries (Irwin, 2018). The European Union has threatened to retaliate by imposing tariffs on particular goods such as US Bourbon Whiskey and Harley-Davidson motorcycles. The Mexican government intends to retaliate by putting tariffs on pork bellies, apples, cranberries, grapes, certain cheeses, and various types of steel. Canada has imposed further taxes on imports of American steel, aluminium, coffee, candy, pizza, and quiche, representing imports worth around 12.8 billion US dollars.

Trump's initial tariffs, on washing machines and solar panels imported from China, have incited retaliatory Chinese tariffs on American exports of soya beans. Another round of tit-for-tat tariffs has followed and there is a threat of an all-out tariff war breaking out. While the tariffs actually imposed to date are limited in size and scope, a full-scale tariff war could involve a substantial increase on a wide range of goods and services. Trump has threatened to impose tariffs on 500 billion US dollars of US imports from China, and China has responded with similar threats. A dispute on this scale would have a substantial effect on trade flows and a significant impact on real per capita incomes. One estimate is that the effect will be as great as that of the 2008/9 global financial crisis (Jean et al., 2018). An analysis from the Banque de France (Berthou et al., 2018) pegs the effects of a general increase in tariff rates by 10 percentage points at between 1 percent and 3 percent of global GDP after two years.

While China's retaliation has been measured, and the European response has been to propose a general lowering, or indeed a removal of tariffs between the United States and the European Union; it is unclear how long this tariff war will last, or how far it will go. Donald Trump appears to believe that tariff wars are easy to win for a country that is running a deficit. But his policies are unlikely to reduce the deficits, and persistent failure may induce him to retain tariffs longer (Irwin, 2018). The tax cuts passed by the US government in 2017 have stimulated consumer spending and will tend to increase the balance of payments deficit, not reduce it. The deficit equals the excess of total spending over production in the country. Unless spending falls relative to the amount of production, that is, unless there is an increase in saving, there will be no reduction in the deficit.

Donald Trump's policy also overlooks the fact that the United States has a trade deficit with the European Union, but a surplus in services and primary incomes. At least according to US foreign commerce statistics, the United States runs a small current account surplus with the European Union, not a deficit.[2] This implies that US companies are actually earning more in the European Union than vice versa. This questions his view that the United States can 'win' a trade war with Europe.

The US administration is using tariffs more widely as a tool of foreign policy. They have been imposed on Turkey (tariffs on exports of steel to the United States doubled to 50 percent and aluminium to 20 percent in August 2018) in response to Turkey's holding of American citizens. These citizens included Andrew Brunson (now released), a pastor from North Carolina, working in Izmir, who was accused of aiding the July

[1] As a recent study by Felbermayr and Braml (2018) shows, according to US data the United States had a bilateral current account surplus with the European Union in 2017, mainly due to a large surplus in primary incomes and a smaller surplus in services, overcompensating the deficit in goods trade.

[2] See Felbermayr and Braml (2018). Eurostat surprisingly reports a current account deficit for the US, but as Felbermayr and Braml explain, the US figures are probably closer to reality than the Eurostat numbers.

2016 attempted coup d'état, and was placed under house arrest. Tariffs have the advantage for the Trump administration that they can be imposed by an edict from the President without the bothersome need for approval by the US congress.

Trump's repeated complaint that the United States has been suckered into bad deals has prompted the United States to pull out of the 2015 nuclear deal with Iran (the 'Joint Comprehensive Plan of Action'), re-impose sanctions on Iran, and threaten sanctions on any firms that do business with the latter. The other signatories to the deal (the United Kingdom, France, Russia, China, Germany, and the European Union) want to preserve it. The ability of the European countries to resist the effects of the US withdrawal and sanctions are restricted because European firms are likely to be sanctioned by the United States if they do business with Iran. As their US business is more important than their actual and potential Iranian links, they are likely to withdraw from Iran, undermining the beneficial effects on the Iranian economy. European banks, in particular, are very susceptible to US pressure. The European Union has attempted to impose blocking sanctions to protect firms that continue to trade with Iran, but it is not clear that they will be effective. As the United States confronts Iran, and Europe is unable to sustain economic ties, Iran is likely to drift further into the sphere of influence of Russia and China, who are more likely to continue to buy its oil, undeterred by US sanctions. Most Iranian oil, which accounts for a significant fraction of global supply at around 4 percent, is sold to China, India, Japan, and South Korea.

These actions against countries who are not allies of the United States are paralleled by similarly aggressive behaviour towards allies. Using the argument that Europe contributes too little to the costs of NATO and the United States too much, Trump has sustained a verbal assault on Europe, limbering up at the G7 meeting in Taormina in May 2017, and more recently erupting at a NATO summit in July 2018, where he demanded that members increased their military spending to 2 percent of GDP by January 2019, in comments that some commentators interpreted as a threat to withdraw from the organisation, notwithstanding Trump's later assurance that he fully supported it.[3] The German Chancellor Angel Merkel commented after Taormina that: "We Europeans truly have to take our fate into our own hands ...".[4] Trump's words have raised questions about whether NATO will survive, and have undermined any deterrence effect it may have by throwing into doubt the commitment of the United States to come to the aid of other NATO members. There has been concern among European leaders and diplomats that Trump might withdraw the United States from military exercises in Eastern Europe and may scale back the US military presence in Europe, weakening the US security umbrella.

4.2.2 Brexit

From the perspective of the European Union as a whole, the prospect of Brexit is a manageable economic irritant, although it will have significant effects on some members and particularly on Ireland. Brexit will also impact some industries, particularly those with long supply chains that go in and out of the United Kingdom, such as the motor industry. The scale of the effects depends on what form Brexit eventually takes, whether the United Kingdom goes for a Norway-style arrangement, with continued participation in the customs union and single market, with minimal disruption to trade, a Canada-style free trade agreement, or a hard or disorderly departure, with trade conducted under WTO rules. The costs and disruptive effects of Brexit to the United Kingdom become clearer as time passes, and voices in favour of abandoning the entire enterprise grow louder. There is growing support for a second referendum, with staying in the European Union as one of the options on the ballot paper, the others being a 'soft' and a 'hard' (WTO) departure. There is the possibility that no proposal put forward by the UK government will get a majority in parliament, the government will lose a vote of confidence, and a general election will ensue. Both major political parties are divided amongst themselves over Brexit. The Conservative party is openly split into camps of increasing mutual hostility. The extreme pro-Brexit faction wants a clean break from the European Union, are prepared for no deal, and are pressuring the government not to make concessions on migration in return for access to the Single Market. Theresa May's government, surviving with a small majority and reliant on the support of the Democratic Unionist Party (DUP) in Northern Ireland, has been trying to keep a majority of Members of Parliament (MPs) onside, making some concessions to satisfy the Brexit extremists, while simultaneously trying to limit economic disruption.

The Labour Party has maintained an equivocal position on Brexit. The party's membership includes many younger people who support staying in the European Union and older people in former industrial areas who strongly support Brexit. Some MPs represent constituencies that voted to remain, while others represent Brexit strongholds. A cross-party group of pro-European MPs are arguing against Brexit and campaigning for a second referendum. There has been talk of a new party being created to coordinate pro-European politicians and increase the influence of this large, but currently disparate group.

[3] Washington Post, 12 July 2018, "At NATO, Trump claims allies make new defense spending commitments after he upends summit", https://www.washingtonpost.com/world/europe/trump-upends-nato-summit-demanding-immediate-spending-increases-or-he-willdo-his-own-thing/2018/07/12/a3818cc6-7f0a-11e8-a63f-7b5d2aba7ac5_story.html?utm_term=.982cd9a3c944.

[4] Politico, 28th May 2018, "Angela and Jacques get frank with Christoph", https://www.politico.eu/article/angela-merkel-europe-cdu-must-take-its-fate-into-its-own-hands-elections-2017/.

While most of the analyses of the effects of Brexit have dealt with the effects on the United Kingdom, some have examined its effects on the European Union. The IMF (2018) finds that, in the event of 'hard' Brexit, long-term output and employment in the European Union may fall by around 1.5 percent and 0.7 percent respectively, relative to what they would have been otherwise; and to a much lesser degree in the event of a 'soft' Brexit. These estimates are on roughly the same scale as those of other studies. Of course, the effects differ from member to member. Ireland may suffer a 4.0 percent fall in output under a WTO scenario in the long term, while the Netherlands, Denmark, and Belgium would see a roughly 1.0 percent fall. Other members' costs would be smaller. Losses under a free-trade-area scenario are somewhat smaller.

While the economic effects of Brexit on the European Union are small, the political effects may be greater. Whether these effects will be positive or negative remains an open question. Early on, Brexit may have been feared as an existential threat to the European Union. Had the United Kingdom shown that leaving was beneficial – if the United Kingdom had been able to have its cake and eat it, as in the Brexiters' fantasy – it may have led to a rush for the door and a disintegration of the European Union. Indeed, this prospect may have stiffened the EU's resolve to take a firm line in negotiations and prevent any mass exodus from happening, insisting on the inseparability of the four freedoms (of movement of labour, capital, goods, and people) in the Single Market.

In the event, the accumulating evidence that the United Kingdom is shooting itself in the foot by leaving may strengthen rather than weaken the remaining 27-member union. Simon Kuper in the Financial Times notes that populists across Europe have dropped the idea of leaving the European Union: Marine le Pen, Geert Wilders, Matteo Salvini in Italy, Syriza in Greece (Kuper, 2018). The United Kingdom has long been seen in some quarters as a difficult member, seeking successive opt-outs, Margaret Thatcher's rebate, and special arrangements, resisting further integration, advocating widening membership as a force against deepening. As the prime minister of Luxemburg, Xavier Bettel, remarked, "Before, they were in and they had many opt-outs; now they want to be out with many opt-ins." The United Kingdom has attempted to limit the European Union to a trading agreement, rather than a political union. The remaining members may be able to pursue further integration without the United Kingdom holding them back. The UK's departure may weaken arguments for open markets and competition and increase the relative strength of the more corporatist tendencies, represented by France, Italy, and southern European members.

Negotiations between the United Kingdom and the European Union on a withdrawal agreement were bedevilled from the start by the unrealistic and conflicting aims of the UK negotiators, the 'red lines' imposed by the UK government, the weak position of the government operating as a minority and surviving with the support of the DUP, and the problem created by Northern Ireland. They eventually concluded in November 2018, with the publication of a draft agreement[5] and a brief political statement on the future relationship between the United Kingdom and the European Union. But these agreements were only put to a vote in the UK parliament in mid-January 2019. A scheduled vote on 11 December 2018 was withdrawn by the government, anticipating that it would be comprehensively defeated by a combination of extreme Brexiteers, arguing for a clean break with the European Union, pro-Europe MPs aiming for closer integration, or indeed, the idea of abandoning Brexit altogether, and Democratic Unionist Party (DUP) MPs dissatisfied with the possible appearance of any differences in treatment of Northern Ireland and the rest of the United Kingdom. The suspicion of any kind of border in the Irish Sea between Northern Ireland and Great Britain is anathema to the DUP.

The European Union insisted from the start that changes to the relations between the Union and the United Kingdom should proceed in stages; that first the terms of the UK's withdrawal should be agreed, and only after that should the longer-term future relations be negotiated. Accordingly, the withdrawal agreement provides for a transition period from 30 March 2019 until 31 December 2020 (with the possibility of an extension of up to two years) in which little will change, in terms of trade and other relations. The United Kingdom continues effectively to be a part of the European Union, except that it loses its ability to take part in any EU decision-making. Freedom of movement between the United Kingdom and the European Union is preserved through the end of the transition period, and most of the rights of EU citizens in the United Kingdom and UK citizens in the European Union are preserved. The United Kingdom continues to be a member of the Single Market, and to maintain EU social and environmental protection, and abide by EU limits on state aid. The United Kingdom can begin to negotiate trade deals with other countries during the transition period, though these should not come into effect until after a new long-term relationship with the European Union has been agreed.

The most contentious element of the withdrawal agreement has been the Northern Ireland backstop. The Good Friday Agreement of 1988, which ended decades of sectarian violence in Northern Ireland, provided for the removal of a hard border between the Republic of Ireland and Northern Ireland, as both were part of the EU customs union and, in due course, the Single Market. Border posts were much resented and had been the object of attacks by the IRA and uni-

[5] Available at: https://ec.europa.eu/commission/sites/beta-political/files/draft_withdrawal_agreement_0.pdf.

onist forces in the preceding decades. The Republic of Ireland, which may be very badly affected by Brexit, campaigned successfully for the European Union to insist that Brexit would not involve the re-instatement of any such physical border on the island of Ireland. This presents obvious problems should the United Kingdom leave the EU customs union and Single Market. Consequently, the backstop provides that until the United Kingdom and European Union have concluded a long-term relationship that would avoid any need for a physical border, Northern Ireland will remain in the customs union and in the single market, as far as most goods are concerned. However, to avoid creating a need for customs checks on goods moving between Northern Ireland and the rest of the United Kingdom (Great Britain), under the backstop, the whole of the United Kingdom will remain in the customs union. Some checks on goods moving between Northern Ireland and the United Kingdom will be needed, but they can be carried out at other ports and manufacturing plants.

Despite the ingenious compromises involved in the proposed backstop, the various constraints on which have left little room for manoeuvre in negotiations (which have been an exercise in squaring the circle), it has generated furious opposition; from the DUP on account of the remaining modest checks on the flow of goods across the Irish sea, and the possibility of slightly different treatment of Northern Ireland from the rest of the United Kingdom; and from hard Brexiteers in the United Kingdom, on account of the possibility that, if the United Kingdom and European Union fail to conclude a longer-term arrangement obviating the need for border checks between the Republic and Northern Ireland, the United Kingdom may be locked into the EU customs union indefinitely. The European Union as a whole, and the Republic of Ireland in particular, have refused to allow the United Kingdom to exit from the backstop unilaterally and insist on its being by mutual agreement. They have also refused to include an end-date. Despite assurances that the European Union does not wish to see the backstop implemented and that it wishes to keep any period of its implementation as short as possible, proponents of hard Brexit have not been satisfied and threaten to vote against the withdrawal agreement.

One of the many problems is that the draft Withdrawal Agreement (WA) makes it very clear that membership of the European Union is better for the United Kingdom than withdrawal from it. The only possible advantage from the UK's point of view is that Brexit may eventually, after the end of the transition period and exit from the Northern Ireland backstop, permit greater limits on migration into the United Kingdom from the European Union. Any such benefits are, of course, hotly contested, and in any case it is clear that reintroducing such controls would come at considerable economic cost. At the same time, it has become abundantly clear that a no-deal Brexit would be much worse than withdrawal under the agreement, except in the view of a small number of extreme Brexiteers and members of the DUP.

The United Kingdom finds itself in a position in which the negotiated withdrawal agreement is likely to be voted down in the UK House of Commons when put to a vote in the middle of January 2019, as is now scheduled. The European Union has ruled out making any further changes to it, although the UK Prime Minister, Theresa May, has stated that she is seeking stronger reassurances on the Irish backstop. Significant changes to the agreement seem unlikely. The alternatives are that the United Kingdom could leave the European Union without an agreement, or that Brexit might be abandoned altogether.

The UK government has recently stepped up preparations for a no-deal Brexit, setting aside GBP 4.2 billion to cover the costs of these preparations, which include putting 3,500 troops on standby in case of disturbances. Businesses in the United Kingdom are aghast, and many people are incredulous. The European Union is also doing some planning for the contingency of a no-deal Brexit. While a substantial majority of members of the UK parliament appears to be firmly opposed to a no-deal Brexit, and a substantial number in favour of no Brexit, they are distributed across the political parties, and seem unable to coordinate their actions. The equivocal position of the main opposition party, Labour, regarding Brexit is a major obstacle to ensuring a soft Brexit or no Brexit at all. There is a widely-held view that a 'no-Brexit' could only be achieved if legitimised by a second referendum; but holding one in itself introduces risks. There is the unsettled question as to what options should be on the ballot paper, which may be complicated if a three-way choice is offered; a referendum is likely to take some time to set up, necessitating a postponement at the very least; and its outcome is far from certain. While there have been shifts in opinion among the UK electorate, it is not clear that support for either a soft or no Brexit would clearly win.

On balance, it appears that a UK withdrawal along the lines of the negotiated agreement is the most likely outcome, although a 'no-deal' or a 'no-Brexit' outcome is still possible. In the case of a negotiated agreement, there will be few immediate effects on trade flows, or migration, and an interval of 21 months (possibly extended by another 24) in which the United Kingdom can negotiate its longer-term relationship with the European Union.

4.3 THE RISE OF CHINA

In the debate over the economic and political future of Europe, the fact that the global balance of power is shifting towards Asia, and especially towards China, is a key factor. In recent decades various countries in East Asia have achieved spectacular growth rates.

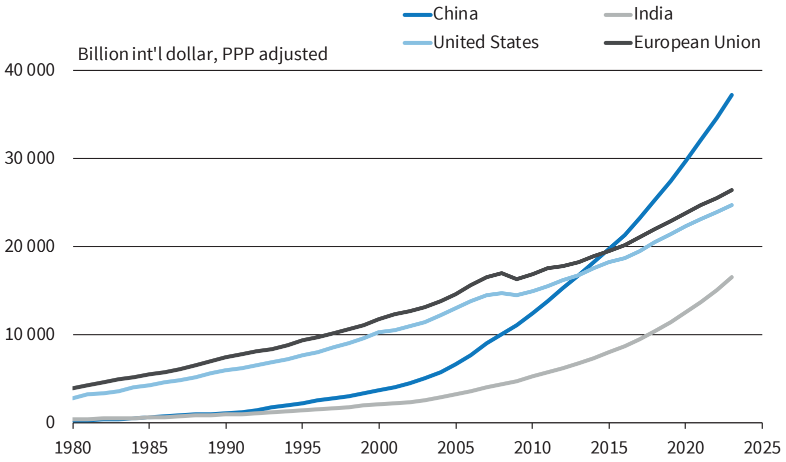
But the rise of China is the most important development, not only because of the size of the country, but also due to its particular political and economic system.

Figure 4.1 compares the development of GDP over time in the United States, the European Union, India, and China, measured in purchasing power parity. According to this metric China overtook the European Union as the world's largest economy in 2015. India is also catching up but at a much lower pace, although its growth is expected to pick up in the years to come. Figure 4.2 shows the size of GDP in current US dollars. Here, the economies of the United States and the European Union are still larger but China is catching up quickly.

The rapid growth of China, and to a lesser extent India too, is leading to a massive shift of weight in the world economy towards Asia. Figure 4.3 shows how the relative shares of global GDP have changed over time, again measured in terms of purchasing power parity. In 1980 the European Union represented almost a third of the world economy. Together with the United States, it produced over half of global GDP, while China's share was negligible. In 2000, the EU's share was still almost a quarter and that of the United States was 20 percent. China's share was just over 7 percent. By 2023 the share of the European Union and the United States will have fallen to 15 percent respectively, while China will account for over 20 percent of world output. China and India together will represent one third of the world economy, according to an IMF forecast.

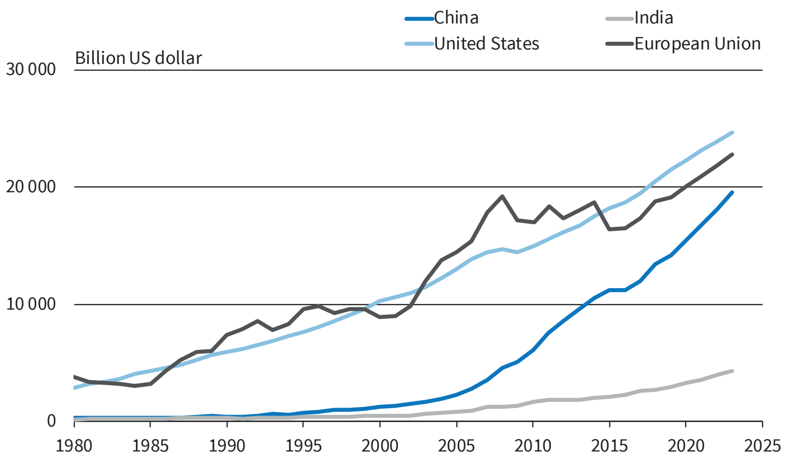
How is China's growth reflected in living standards? Figure 4.4 shows the catch-up process in per capita income. In 1980 per capita income in China was just 2.5 percent of the US level. In 2003 it reached the 10 percent threshold and in 2023 it will reach almost a third. The discrepancy is

Figure 4.1
GDP of China, the European Union, India, and the United States since 1980



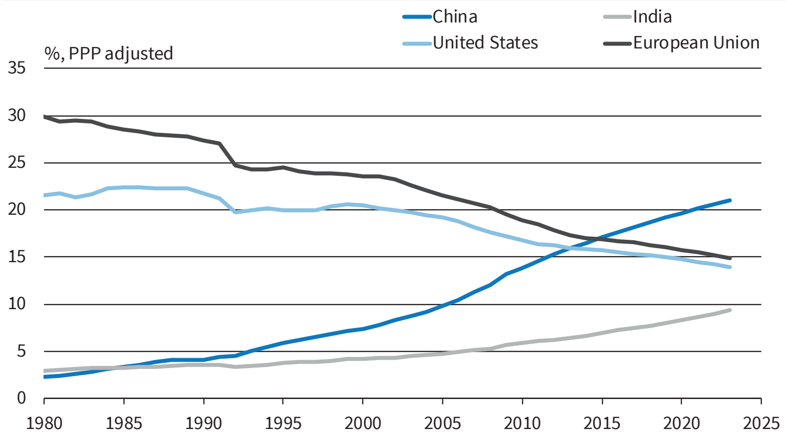
Source: IMF, World Economic Outlook (October 2018). © CESifo

Figure 4.2
GDP of China, the European Union, India, and the United States since 1980



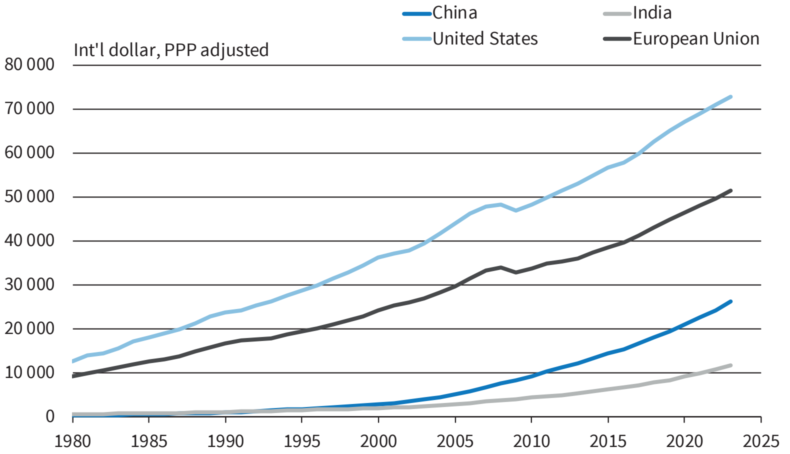
Source: IMF, World Economic Outlook (October 2018). © CESifo

Figure 4.3
Share of World GDP of China, the European Union, India, and the United States since 1980



Source: International Monetary Fund, World Economic Outlook (October 2018). © CESifo

Figure 4.4
GDP per Capita of China, the European Union, India, and the United States since 1980



Source: IMF, World Economic Outlook (October 2018). © CESifo

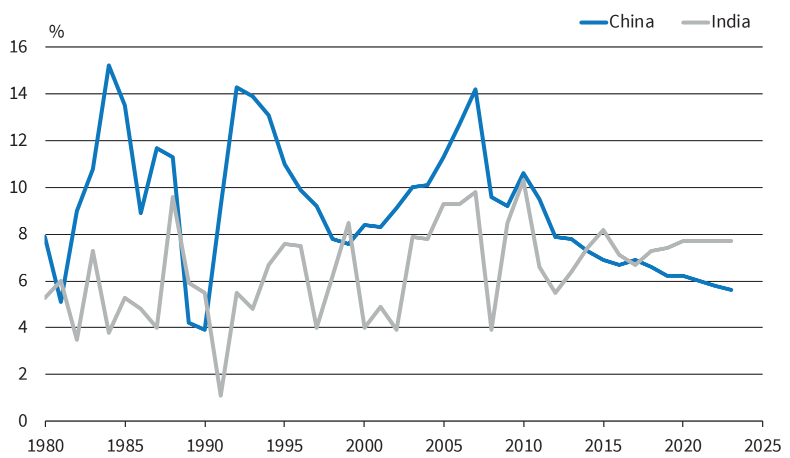
still large, but shrinking. It should also be taken into account that there are huge differences in economic development within China. The most highly-developed provinces have per capita incomes not far off those of advanced countries, while living standards in the less developed provinces are closer to those in developing countries. Of course, this heterogeneity is a feature of most developing and emerging economies and not just China.

Clearly, a key question is whether the economic development of China can continue at the same pace in the future. In recent years, China has experienced a slowdown in growth rates, which is widely expected to continue, but the economy is still growing at rates of around 6 to 7 percent (Figure 4.5). Given the size of Chinese GDP, this is still a very dynamic development.

While there is a consensus that Chinese growth rates will be smaller in the future, the open question is whether the country will continue to catch up in terms of per capita incomes, and how fast this process will be? While the catching up process is widely expected to continue, there are also more sceptical assessments. For instance, in his paper 'Growing and slowing down like China', Zilibotti (2017) argues that China faces a number of challenges that might slow down its growth. He emphasises that China has arrived at a critical point in its economic development, where the catching up process needs to change from 'investment led growth' to 'innovation led growth'. The concept of investment led growth refers to a situation whereby capital accumulation and the adaptation of existing technologies and knowledge is enough for a country to catch up economically. But beyond a certain level of economic development, this is no longer enough. "At this juncture, the focus on physical capital accumulation gives way to human capital and innovation" (Zilibotti, 2017, p. 948). In addition, the state of China's economic per capita income – roughly one third of the leading industrialised countries, is sometimes referred to as the 'middle income trap' (Eichengreen et al., 2014).

The Chinese government is well aware of these challenges. In its 2015 work report, the government explicitly mentions that the country faces considerable challenges and needs to: "avoid falling into the 'middle income trap', and achieve modernisation …".[6] As a result of this insight, the Chinese government has decided to invest heavily in research and science and to pursue an industrial policy strategy called 'Made in China 2025', aimed at developing China's manufacturing sector. We will describe and discuss this strategy further below.

Figure 4.5
Real GDP Growth Rates in China and India since 1980



Source: International Monetary Fund, World Economic Outlook (October 2018). © CESifo

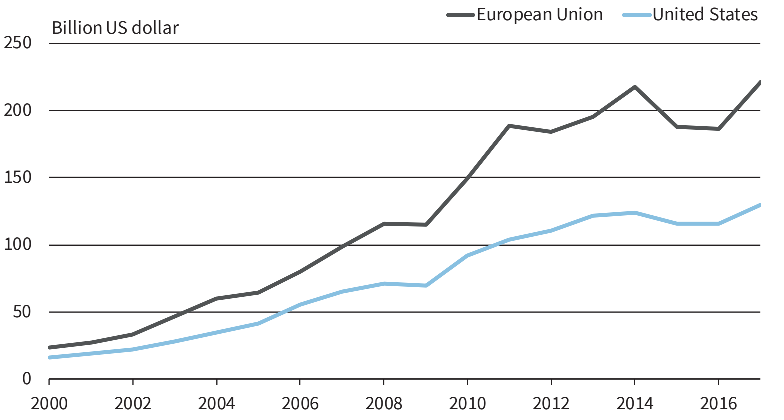
4.4 WHAT IS THE ECONOMIC IMPACT OF THE RISE OF CHINA ON EUROPE?

The rise of China affects Europe in many ways – it affects not just the European Union, but also the rest of the world and its relations with Europe. The rise of China has a profound impact on the world economy and on the global balance of political power. The opening up of China has led to the integration of hundreds of millions of people into the world economy. This has led to

[6] Report on the Work of the Government (2015), p. 9.

a huge increase in the supply of labour, but the Chinese population also has a growing weight as a consumer. In the rest of the world the impact of the opening up of China was an initial increase in trade. Later, capital movements moved to the focus of the debate. European and US companies have been active as investors in China for a long time. More recently Chinese outbound foreign investment started growing. A more recent impact is through China's role as an emerging power in science and technology. We will briefly discuss each of these factors below.

Figure 4.7
Exports of Goods and Services of the European Union and the United States to China, 2000–2017



Source: UN Comtrade. © CESifo

4.4.1 Trade with China

Within a relatively short period of time, China has become the world's largest exporter of goods and services, overtaking big exporters like the United States, Japan, and Germany. Figure 4.6 illustrates the growth of imports from China for the United States and the European Union.

At the same time, China has become the world's second largest importer of goods and services, after the United States. Exports of the United States and the European Union to China are illustrated by Figure 4.7.

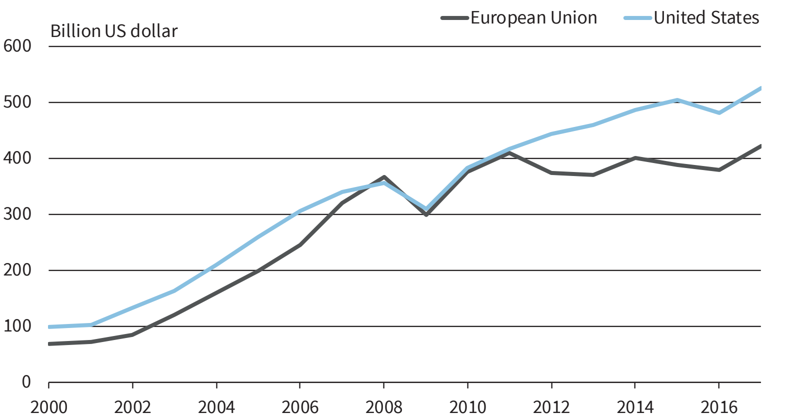
The integration of China into global trade has had a profound impact on Europe, as well as the rest of the world. It is one of the fundamental insights of international economics that trade integration will increase global welfare. But the gains may be distributed unevenly and there may be groups in the economy who lose out as a result of trade liberalisation.

The availability of cheap products from China has increased worldwide consumer welfare enormously. But many companies competing with Chinese products have been put under intense competitive pressure, forcing them to restructure or even to shut down. This has led to job losses and falling wages, especially for low-skilled workers in advanced economies.[7]

At the same time, China's imports have created opportunities for companies in other countries. In Europe, for instance, producers of luxury goods, sophisticated machinery and premium cars found new sales markets in China. This protected existing jobs in Europe or led to the creation of new ones. For many companies, the opening up of China also created opportunities by providing cheap intermediate goods.

The gains and losses due to increasing global trade differ considerably not just across individuals and firms, but also across sectors, regions, and countries. There is a growing body of literature investigating how large changes in international trade, like the opening up of China or the transition of the formerly communist countries of Eastern Europe, have affected different workers, sectors, and regions. Various studies on the United States have shown that industries competing with Chinese imports have suffered, as have regions where these industries were concentrated (Autor et al., 2013). Trade liberalisation is also widely considered to

Figure 4.6
Imports of Goods and Services of the European Union and the United States from China, 2000–2017



Source: UN Comtrade. © CESifo

[7] Clearly, trade is not the only – and may not even be the most important – factor leading to the decline of manufacturing jobs and falling wages for low skilled labour. Technological change plays a key role as well. Of course, trade and technological change are interdependent.

be a key factor driving the decline in manufacturing employment in the United States.[8] Autor et al. (2013) refer to these effects as the 'China syndrome'. In a recent study Caliendo et al. (2018) find that the China trade shock led to a reduction of 550,000 US manufacturing jobs. This is equal to about 16 percent of the observed decline in US manufacturing employment between 2000 and 2007. Pierce and Schott (2016) find a link between trade policy changes reducing the likelihood of tariff increases on Chinese imports and the decline in US manufacturing.

Empirical studies for Europe show a slightly different pattern. Dauth et al. (2014) investigate how trade liberalisation with Eastern Europe and China has affected firms and workers in import competing industries in Germany. Their key finding is that the impact of competition from Eastern Europe was stronger than that of import competition from China. The reason is that the pattern of specialisation in German industry was such that imports from China were less of a threat than in other countries. For instance, the textile industry had largely vanished in Germany even before the integration of China into global trade. The other interesting finding is that many German firms were able to benefit from export opportunities created by the liberalisation of trade with Eastern Europe and China. Overall, Dauth et al. (2014) find that trade liberalisation led to a net increase in employment in Germany amounting to 442,000 jobs, suggesting that German workers have been winners of globalisation in recent decades. However, most of this effect is due to trade with Eastern Europe, not China.

Badinger and Reuter (2017) investigate the impact of trade with China and Eastern Europe for regions in 17 Western European countries for the period 1991-2011. Their findings confirm that jobs were lost in import competing regions, while regions with industries benefitting from export opportunities experienced growth in manufacturing jobs. Overall, job gains and losses balanced out. There is, however, considerable heterogeneity across countries. France and the United Kingdom are identified as the countries with the largest losses. Germany, in contrast, also lost jobs due to trade with China, but that was overcompensated for by job growth in firms exporting to Eastern Europe. Of course, the effect of trade on manufacturing employment is only one aspect of the consequences of trade shocks. A key issue is the ability of the economy to generate other job and growth opportunities, particularly in the service sector. Clearly, new jobs in the service sector may be less well paid or require different qualifications and greater flexibility than those lost in the manufacturing sector. In particular, older employees may find it difficult to adapt. Some may also prefer early retirement to moving or retraining.

Overall, the literature on the impact of trade with China suggests that the shock for import competing industries in the United States was stronger and more negative than in Europe. But in both regions the 'China shock' underlines the fact that trade integration creates winners and losers, and these two groups tend to cluster regionally, which means that entire regions or even countries may be winners or losers. It is important to note that the overall impact of increasing trade also depends on the ability of economies to adjust and create new jobs. Different European countries have had very different experiences in this regard (see Chapter 2).

[8] Between 1944 and 2015 the share of manufacturing in US employment declined from 39 percent to 8.6 percent (Autor et al., 2016).

4.4.2 Investment Flows

Trade in goods and services is linked to investment flows, particularly in cases where trade imbalances arise. In general, irrespective of trade balances, capital mobility is another potential source of global welfare gains. Again, the potential for welfare gains through capital movements does not imply that everybody will benefit.

For a long time China was a net capital exporter. That is surprising in so far as one could expect a developing country like China in the 1980s and 1990s, with abundance of labour rather than capital, to import capital from the industrialised world. But the more common empirical pattern is that successful economic development often goes along with a strong focus on exports and regulated capital markets, which limit foreign capital inflows, leading to current account surpluses. This development strategy requires that domestic savings are large enough to finance domestic investment, as well as the current account surplus.

Figure 4.8 shows the development of savings and investment in China since the 1980s. Since the early 1990s, savings have consistently exceeded domestic investment. In recent years the difference, which is equivalent to the current account balance, has declined. However, the many years of surpluses imply that China has accumulated a significant stock of investment in foreign assets.

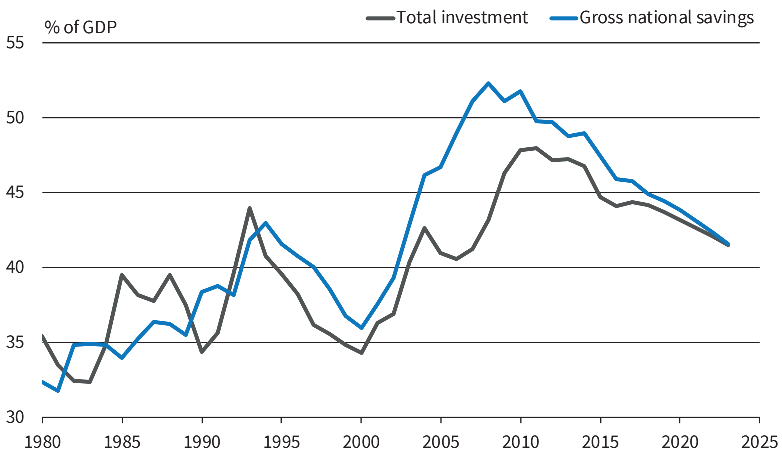
Of course, the current account surplus only reflects the change in net foreign assets. From an economic perspective, the gross capital flows are at least as important. Since there is considerable foreign investment in China, gross foreign assets held by Chinese investors have also grown.

It is well known that China holds a significant share of its foreign assets in US government bonds.[9] However, it has been part of the explicit economic policy strategy of China for several years to diversify the country's foreign asset holdings. In recent years Chinese companies have become increasingly active as international investors. Figure 4.9 illustrates the

[9] In August 2018 the stock of US government bonds held by foreign investors was 6.2 trillion US dollar, or roughly 30 percent of the overall outstanding debt of the US federal government. 1.16 trillion US dollar were held by Chinese investors, primarily by the Chinese central bank, available at: http://ticdata.treasury.gov/Publish/mfh.txt.

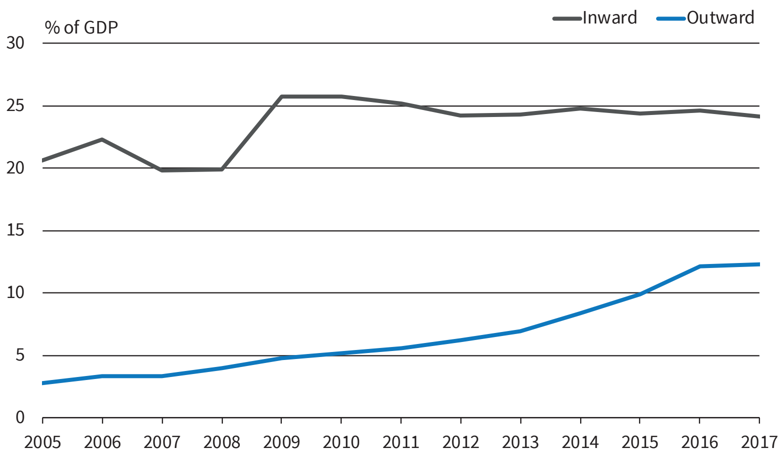
development of China's outbound and inbound Foreign Direct Investment (FDI). Until the mid-2000s Chinese outbound FDI was negligible. In 2005 it accounted for 2.8 percent of China's GDP. By 2017 this figure reached 12.8 percent. Although the volume of FDI in China is larger, it is growing more slowly. In 2005 it totalled 20.6 percent of China's economic output and in 2017 it amounted to 24.3 percent. Its share in Chinese GDP has been roughly constant since 2009. Foreign investment is still growing, but not more quickly than Chinese GDP.

Figure 4.8
Savings and Investment in China since 1980



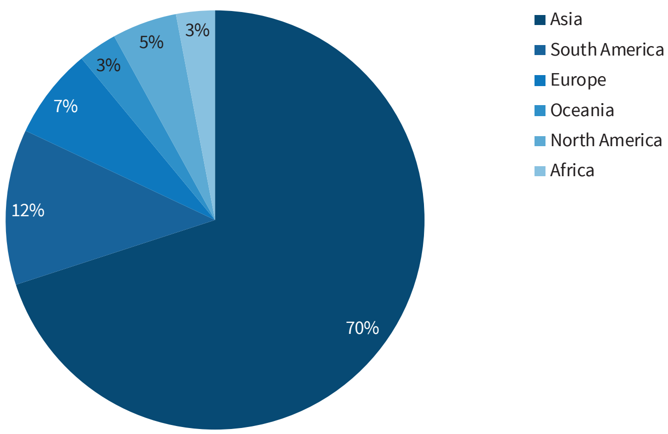
Source: IMF, World Economic Outlook (October 2018). © CESifo

Figure 4.9
Inward and Outward FDI Stocks in China since 2005



Source: OECD, Foreign Direct Investment Stocks Data. © CESifo

Figure 4.10
Chinese Outward Foreign Direct Investment Stock in 2017



Source: OECD, Foreign Direct Investment Stocks Data. © CESifo

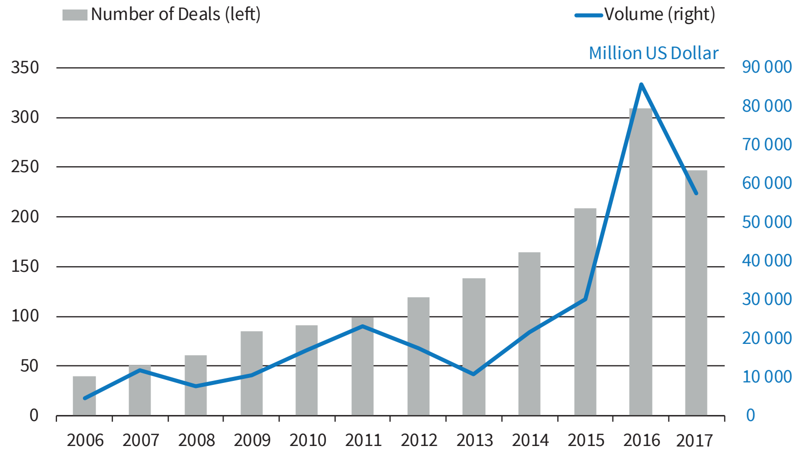
Figure 4.10 illustrates the geographical distribution of Chinese outbound foreign direct investment. Almost three quarters is located in other Asian countries. Only 7.6 percent goes to Europe.

While the volume of Chinese foreign direct investment in Europe is still low, it is expanding rapidly. A large share of this investment takes the form of mergers and acquisitions. Figure 4.11 shows that takeovers of European companies by Chinese investors have increased considerably in recent years.

Some of these acquisitions have attracted considerable attention in the public debate. A recent Bloomberg story entitled "How China is buying its way into Europe"[10] reports that Chinese investors have taken over approximately 360 companies since 2008, ranging "from Italian tire maker Pirelli & C. SpA to Irish aircraft leasing company Avolon Holdings Ltd., while Chinese entities also partially or wholly own at least four airports, six seaports, wind farms in at least nine countries and 13 professional soccer teams."[11] In Germany the Chinese takeover of the industrial robot producer Kuka attracted a lot of attention. Chinese investors have also acquired significant stakes in car companies, including Daimler in Germany and Peugeot-Citroen in France.

[10] Available at: https://www.bloomberg.com/graphics/2018-china-business-in-europe/.
[11] Ibid.

Figure 4.11
Merger and Acquisition Activities of China in Europe, 2006–2017



Source: Ernst & Young (2018). © CESifo

A further important characteristic of Chinese foreign investment is a growing interest in infrastructure investments. For instance, Chinese state owned companies like the China Ocean Shipping Company (COSCO) and China Merchants Port Holdings have acquired cargo terminals and other facilities or taken over management functions in various ports in Europe including in Malta, Antwerpen, Zeebrugge, and Pireaus. Chinese infrastructure investment in Europe and other parts of the world is often linked to China's 'Belt and Road' initiative, which aims to revolutionise economic exchanges between Asia and Europe by expanding road networks, rail links, ports, and communication and energy networks. China Merchants Port Holdings explicitly points out that its subsidiary Terminal Links "operates a network of terminals with a global reach including Far East, North Europe, Mediterranean, West Africa and North America, among them, Terminals including Malta Freeport Terminal are important hubs along the 'One Belt and Road' layout."[12]

4.4.3 China's Growing Role in Science and Technology

Together with its growing role in international trade and border crossing investment, China has also gained importance as a global player in science and technology. Just two decades ago, China was primarily a producer of low tech goods in the lower quality segment. But this has changed. The government, as well as state-owned and private companies, have made considerable efforts to invest in research and development.

Figure 4.12 shows that the share of spending on research and development is still higher in countries like Japan, the United States, Germany, and even in the EU-28, but China is catching up. Gaining ground in science and technology and eventually taking over a leading role is a key objective of Chinese economic policy.

In 2015 the Chinese State Council launched its 'Made in China 2025' initiative, which it defines as "the country's first ten-year action plan focusing on promoting manufacturing."[13] In his report on the work of the government in 2015, Chinese Prime Minister Li Keqiang summarised the objective of Made in China 2025 as follows: "We will … upgrade China from a manufacturer of quantity to one of quality" (Report on the Work of the Government, 2015, p. 26).

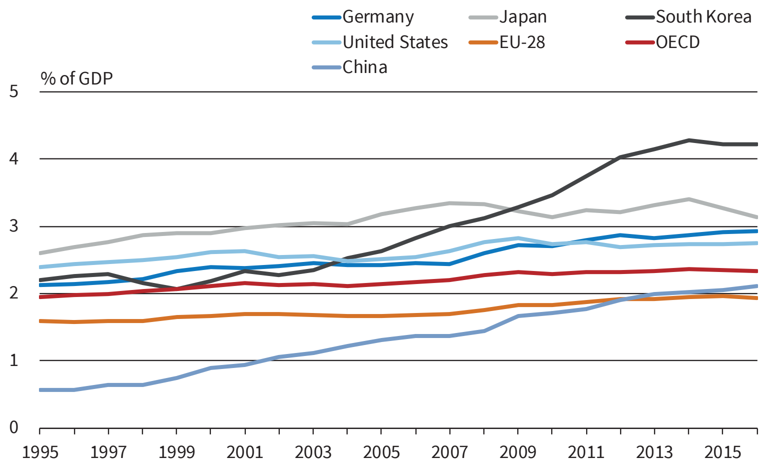
The key elements of the plan are as follows:

"Nine tasks have been identified as priorities: improving manufacturing innovation, integrating technology and industry, strengthening the industrial base, fostering Chinese brands, enforcing green manufacturing, promoting breakthroughs in ten key sectors, advancing restructuring of the manufacturing sector, promoting service-oriented manufacturing and manufacturing-related service industries, and internationalising manufacturing.

[12] Available at: http://www.cmport.com.hk/EN/business/Detail.aspx?id=10000819.

[13] Available at: http://english.gov.cn/policies/latest_releases/2015/05/19/content_281475110703534.htm.

Figure 4.12
Spending on Research and Development for Selected Countries, 1995–2016



Source: OECD Science, Technology and R&D Statistics. © CESifo

The above ten key sectors are:

1. New information technology
2. High-end numerically controlled machine tools and robots
3. Aerospace equipment
4. Ocean engineering equipment and high-end vessels
5. High-end rail transportation equipment
6. Energy-saving cars and new energy cars
7. Electrical equipment
8. Farming machines
9. New materials, such as polymers
10. Bio-medicine and high-end medical equipment.

The country should also further open up its market and attract foreign investors to invest in key areas, such as the development of new information technology and bio-medicine, and foreign companies and institutions should be encouraged to set up R&D centers in China."[14]

China's efforts to invest in research and development and to upgrade its large manufacturing sector have given rise to a number of concerns in other countries. Foreign companies have pointed to the risk that 'Made in China' may lead to more protectionism and import substitution. At a more fundamental level, there are growing fears, particularly in the United States, that China may overtake others and become the leading country in science and technology, with far reaching economic and geopolitical implications. In Europe the debate is generally more positive and recognises that the rise of China generates not only risks, but also significant opportunities.

4.5 POLICY IMPLICATIONS FOR EUROPE

How should the European Union react to and adapt to the changing external economic and political conditions described in the preceding sections? We have discussed three important developments. The first is the shift in US policy towards protectionism and away from rule-based international trade as represented by the WTO as well as the growing US critique of Europe's inadequate contribution to common defence efforts, and particularly to NATO. The second is the necessity of dealing with the United Kingdom as an external partner after Brexit. The third is the rise of China.

Those who advocate "more Europe" argue that individual EU member states are too small to play a role at the global level. Here the idea is that Europe can only be successful if it is united and speaks with one voice. This suggests that member states should shift responsibilities to the European level.

Critics point out that greater centralisation of political decision making is incompatible with effective democratic control, that it will fail to do justice to the diversity of Europe and that it would only undermine political support for the European Union.

Clearly, different EU member countries will have rather different perspectives on the pros and cons of deeper economic and political integration. Those member states who have done well economically may be more likely to favour intensified economic integration. Those doing less well may ask for more political integration, in the hope that this will lead to greater redistribution. Yet others may expect little from "more Europe" and reject both.

There is a large body of literature in economics that discusses the advantages and disadvantages of decentralised versus centralised decision making in federations and confederations like the European Union. The advantages are primarily economies of scale in the provision of public goods and the internalisation of spill-overs. The advantages of decentralised policy making are that the political process is closer to the citizens; that decentralisation allows for learning from policy experimentation; and that differences in preferences across regions or countries are more likely to be taken into account.

In addition, whether centralised or decentralised policy making is preferable also depends on the quality of economic policy making. Those who think that governments tend to tax and regulate too much largely favour decentralisation, because mobility across borders leads to inter-jurisdictional competition and limits the powers of governments. Of course, mobility across borders itself depends on joint policies. Those who think that governments primarily do desirable things and correct market failures tend to reject intergovernmental competition caused by the mobility of resources. Clearly, the perception of the quality of government both at the national and the European level is likely to differ across EU member states.

How does the optimal degree of centralisation and decentralisation change as a result of changes in the external environment? Does the rise of China, Brexit or the decline of US leadership in security policy require the European Union to centralise or decentralise?

For some policy areas the answer seems straightforward. International security and military protection can be seen as an international public good. If the US supplies less of this good and Europe can do nothing about this, the rational answer for the European Union is to supply more. Since there are massive economies of scale in this policy area, the conclusion is that "more Europe" in defence and foreign policy is needed. This would, of course, come at the price of reducing scope for individual member states to pursue their own foreign and security policy. But if it is correct that even countries like France do not have enough weight to be effective as a geopolitical, or even a regional power, this price is small.

[14] Available at: http://english.gov.cn/policies/latest_releases/2015/05/19/content_281475110703534.htm.

In other policy areas, and particularly in economic policy, the optimal reaction to changes in the international environment is less straightforward. In the following we will discuss the policy implications of these changes with respect to a) international trade, b) policies vis-a-vis foreign investments, and c) policies regarding technology, research, and innovation.

4.5.1 International Trade and the European Union

Trade policy is a competence of the European Union because the EU's internal market implies that trade with the rest of the world cannot be done at the level of the member states.

The shift of US trade policy towards protectionism and bilateral trade deals and away from multilateral and rule-based trade in the framework of the WTO implies that the European Union will need to defend its trade interests in an increasingly volatile environment. In a world where trade policy is dominated by the interests of exporters and import competing companies and their employees, leverage in the form of a large domestic market is of key importance.

Brexit will diminish the size of the EU's internal market, but this market will still be one of the two largest in the world, next to that of the United States. Controlling access to this market gives the European Union leverage to ensure that other large markets remain open for European exporters. However, this can only be achieved if the European Union acts in a consistent manner. Commercial policy is a competence of the European Union, but trade and investment treaties often have implications for other policy areas. If trade agreements require ratification by the member states, there is a risk that the European Union will lose its ability to act. Individual countries may exploit veto rights or demand side payments; and the European Union as a whole may lose the ability to defend its interests consistently.

How should the European Union deal with the structural change induced by international trade? The fall of the iron curtain in 1989 and the opening up of China gave rise to trade-shocks that are fairly unlikely to be repeated. But the emerging economies continue to develop rapidly, and pressures to adjust to changing conditions in world markets will not go away. To the extent that this adjustment process involves economic policy reforms, the role of the European Union is limited, as explained in Chapter 2.

4.5.2 Policies towards Foreign Investment

Europe and the European Union have a long history of being open to foreign investment. Should this change just because Chinese investments are becoming more important? If there are reasons to regulate foreign investment, a key question is whether the European Union needs to act; or whether this can be left to the member states. In principle, capital mobility is a key ingredient of the European internal market. This would suggest that the European Union should be responsible for the regulation of foreign investment in the European Union. But as a matter of fact, the European internal market is still fragmented when it comes to investment. The regulation of FDI is currently a responsibility of the member states.

China's growing investment activity abroad, not just in Europe, is arousing widespread suspicion. To some extent this is reminiscent of the reaction to growing Japanese foreign investment in the 1980s. Yet, there are a number of perfectly legitimate reasons for Chinese investors to be active abroad, including in Europe. Firstly, it is well known and perfectly understandable that China wants to reduce its exposure to the US dollar and US government bonds. Secondly, a growing number of Chinese private investors are trying to accumulate assets abroad to diversify their portfolio; and possibly to protect themselves against potential seizure by China's government. Thirdly, Chinese companies are trying to improve the distribution channels for their exports through the acquisition of foreign companies. Fourthly, China is trying to protect its access to commodities. Fifthly, Chinese investors are buying technology companies to acquire knowhow. This is an explicit part of its 'Made in China 2025' strategy, which aims to upgrade the country's manufacturing sector.

In principle, these reasons closely resemble the incentives driving investors in Europe, the United States or anywhere else. There are concerns about foreign investments when it comes to the acquisition of companies owning technologies that are relevant for defence or other aspects of security, but that is again a general concern, not just one related to Chinese investors.

A major difference, however, is that when companies or individuals from China make investments, it is harder to recognise whether a private investor is behind the deal, or whether the Chinese government is involved. The reason is that the separation between the private and the public sector in China is less clearly defined than in most other countries, even if that separation is often blurred in western market economies, too. It is clear that the Chinese government is frequently involved when Chinese investors buy companies abroad. Many Chinese investors are state-owned companies. But even in cases where private companies invest, the Chinese government is likely to be involved. One should also take into account that the Chinese banking system is almost entirely state-owned. To the extent that Chinese private investors finance foreign investment via domestic banks, the public sector is inevitably involved. This raises a number of issues.

At a very general level, it is a widely shared principle in international economic relations that companies and investors from all countries should operate on a level playing field. Governments should not subsidise their investors because this would give them an advantage over their competitors. This type of advantage is widely considered to be unfair; more importantly, at least from an economic point of view, such subsidies could lead to economic distortions and welfare losses. Given this, governments should refrain from using taxes, subsidies, or other policy instruments that could distort international trade or capital flows. Of course, a country can only comply with this principle if its economy has a well-defined private sector that is distinct and separated from the public sector, a separation which characterises a market economy, but not a communist country. There is a long debate related to China's WTO membership over whether or not China can be considered as a market economy. WTO rules imply that the market economy status of a country is relevant for the scope of measures that other countries may take if they think there is a case of unfair trade practices. Of course, public policies influence the competitive position of private companies in many ways, and many, if not all countries, including western market economies, use these instruments extensively.

However, beyond the general issue of whether or not there is a level playing field for investors from different countries, the debate over foreign investment largely focuses on the more specific issue of technology transfer. A widely discussed recent example is the Chinese takeover of the German robotics company Kuka. This takeover triggered a debate over whether acquisitions of high tech firms should be regulated to prevent economic disadvantages for the domestic economy. In principle, companies who own valuable patents or have a technological advantage over their competitors can be expected to be correspondingly expensive. If Chinese companies, backed by the government, outbid interested parties from other countries, they might end up paying more for the firm in question than it is actually worth. Other bidders may be unhappy about that, but from a policy perspective there is no apparent reason to prevent Chinese investors from buying overpriced companies.

But this interpretation of events could also be naïve. It could be risky for a European or US company with a presence in the Chinese market to compete against a Chinese bidder in a takeover. European or US bidders may worry that the Chinese government could block their market access in China. This would imply that government support to Chinese investors does not lead them to pay too much; they might also pay too little. This type of concern is less relevant in the case of acquirers from countries with a clearer separation between the government and the private sector than in China.

In addition, the takeover of a technology company and changes to its research and development activity may have external effects which are, by definition, not reflected in the purchase price. These externalities may take the form of positive local spillovers caused by the presence of a research lab in a location where other companies have similar activities. If one firm leaves as a result of an acquisition, the productivity of the others may decline. Alternatively, if a company has knowledge of other firms in the sector, selling this knowledge may have consequences for the competitive position of these companies. Of course, this is a concern that applies to any takeover, not just cases where the investor comes from China. What does this imply for public intervention? Governments could, in theory, block takeovers in cases where the foreign acquisition has negative spillovers on the domestic economy. It is worth noting, however, that takeovers may also generate positive effects on the rest of the economy. Investors may, and often do, bring with them new technologies or better management practices. For purposes of practical economic policy, it is very difficult – if not impossible – to determine which type of spill-over prevails on a case by case basis.

Another controversial issue is whether more regulation of Chinese infrastructure investments in Europe is needed. These investments are criticised for two reasons. The first is the concern that security risks may arise if investors controlled by foreign governments operate critical infrastructure. This is not very convincing. For instance, if the Belgian government thinks that the container terminal in the port of Zeebrugge is not being operated as it should be, it could expropriate Chinese investors or neutralise them in other ways. The second critique is that, particularly in poorer EU member states, infrastructure investment might allow the Chinese government to buy political influence in the country and, through that country, influence the political decisions of the European Union. Many EU decisions call for unanimity among its members. That makes the European Union particularly susceptible to attempts to divide it by outsiders. NATO's former Secretary General Anders Fogh Rasmussen recently criticised several EU states that have received Chinese investment for watering down an EU declaration made in summer 2017 that decried Peking's claims to maritime rights and resources in the South China Sea as a violation of international law.

Whether Chinese investment really buys political influence, and whether this political effect is linked more to infrastructure than to other types of investment should be investigated more deeply. But it is clear that the European Union cannot allow China or other players to cause rifts in the European Union in order to manipulate political decisions. This not only applies to foreign and security policy, but also to economic policy.

Another, more straightforward reason for the European Union to regulate inbound FDI from countries like China is that European investment in China is also regulated heavily and subject to many restrictions. If the European Union wants better market access for its companies, it will need to use access to the EU's market as leverage.

What are the implications for public policies towards foreign investment in Europe, and how should responsibilities be divided between the national and the European level? Currently, 13 EU member states have national mechanisms for screening inbound foreign investment and reserve the right to restrict these investments.[15] These mechanisms usually focus on security issues, some include additional aspects.[16] Countries outside the European Union often have similar procedures. In the United States the 'Committee on Foreign Investment in the United States' (CFIUS) screens foreign investments, focusing on their implications for national security.[17]

Should all EU countries have investment screening mechanisms, and is there a need for action at the European level? Recently, the European Commission proposed the introduction of a European screening mechanism, which would build on and extend national procedures (European Commission, 2017). Essentially, all member states would screen foreign investments and inform the European Commission and the other member states. The European Commission would investigate the takeover bid and issue an opinion. The final decision would be taken by the member state. What are the criteria that would guide the screening? Article 4 of the regulation proposed by the Commission[18] puts this as follows:

"In screening a foreign direct investment on the grounds of security or public order, Member States and the Commission may consider the potential effects on, inter alia:

- Critical technologies, including artificial intelligence, robotics, semiconductors, technologies with potential dual use applications, cybersecurity, space or nuclear technology;
- Security or supply of critical inputs; or
- Access to sensitive information or the ability to control sensitive information."

In determining whether a foreign direct investment is likely to affect security or public order, Member States and the Commission may take into account whether the foreign investor is controlled by the government of a third country, including through significant funding."[19]

Is this an appropriate way of dealing with foreign investments including investments coming from China? There is no doubt that foreign takeovers may have border crossing spill-overs and implications for joint policies at the European level. Foreign investment is also closely related to the area of commercial policy, which is a responsibility of the European Union. Thus, action at the European level is justified. There is also a consensus that one of the objectives of European investment policy should be to achieve reciprocity – the treatment of European investors abroad should be equivalent to the treatment of foreign investors in Europe. In China, for instance, domestic market access for Chinese companies, and particularly for state-owned companies, is clearly better than for foreign investors. It should be one of the objectives of the EU's investment policy to remove this discrimination.[20] The chances of achieving this through uncoordinated action by individual member states are small if not zero. The European Union has the necessary leverage to make progress in this area.

There are certainly a number of risks in this screening process. Firstly, the decision-making process is complicated and will take time. Secondly, since the final decision is made by the member state where the acquisition takes place, it is at least an open question whether the process will lead to decisions that are efficient for the European Union as a whole; and not just for individual member states. Of course, compared to the status quo, where screening does not take place at all, or only at the national level, the new procedure would make it more likely that common interests were taken into account. Thirdly, every political screening process is prone to lobbying. Combined with the fact that the criteria for the screening are rather vague and offer ample room for interpretation, there is a risk that final decisions may be influenced by special interests. Of course, lobby influence also exists in purely national screening processes. Fourth, Article 3 of the proposed regulation states that not just the member states, but also the Commission may screen foreign investments. How that fits into this decision-making process, and particularly whether the member states will have the final decision right in these cases too, should be clarified.

Overall, the case for a European screening mechanism along the lines of the Commission proposal is strong. Emphasis should be placed on keeping the process as simple and as transparent as possible. The European Commission should take the initiative to formulate a common EU foreign investment policy with the objective of achieving reciprocal treatment

[15] Available at: http://trade.ec.europa.eu/doclib/docs/2017/september/tradoc_156040.pdf.
[16] Detailed information on national screening mechanisms is available here: http://www.europarl.europa.eu/RegData/etudes/BRIE/2018/614667/EPRS_BRI(2018)614667_EN.pdf.
[17] Recently the scope of the screening was extended through the Foreign Investment Risk Review Modernization Act of 2018 (FIRRMA), see https://home.treasury.gov/policy-issues/international/the-committee-on-foreign-investment-in-the-united-states-cfius.
[18] Proposal for a Regulation of the European Parliament and of the Council establishing a framework for screening of foreign direct investments into the European Union, available at: https://ec.europa.eu/transparency/regdoc/rep/1/2017/EN/COM-2017-487-F1-EN-MAIN-PART-1.PDF.
[19] Ibid, p. 20.
[20] See García-Herrero and Xu (2017).

of European investors in foreign markets, including China.

4.5.3 Policies on Technology, Research, and Innovation

Economic growth and prosperity is largely driven by the creation and dissemination of knowledge and new technologies. This is why policymakers in all advanced economies emphasise human capital formation, research, and innovation. This is also true for the European Union. In the EU 2020 strategy one of the targets is to increase gross domestic expenditure on research and development to 3 percent of GDP in all member states. Nevertheless, there is a widespread view that the European Union needs a more consistent strategy in research and technology policy to sustain economic growth. To date only two out of 28 member-states have reached the 3 percent-target for R&D spending (see Figure 4.13).

There is a growing concern that the United States and China will be the leading powers in technology and science and that the European Union will fall behind. China's industrial policy initiative 'Made in China 2025' is often referred to as an example of a clear and focused industrial policy strategy, implying that something similar is lacking in Europe.

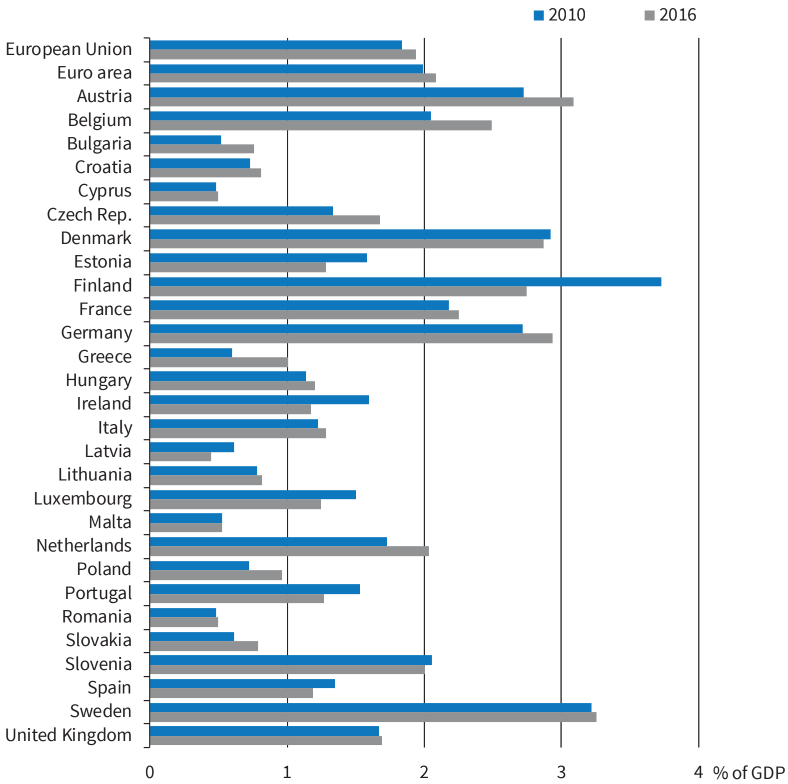
At the same time, industrial policies that pick specific sectors, technologies or even firms, to be growth drivers of the future face the problem that neither governments nor anyone else knows which sectors or projects will be future winners. The idea that governments or industry leaders can 'pick winners' is a pretence of knowledge. From this perspective, governments should finance basic research, create a favourable environment for entrepreneurial innovation, and create room for diversity and experimentation. Governments may also need to supply or coordinate the creation of complementary infrastructures for new technologies. For instance, one of the impediments to the development of e-mobility is the lack of infrastructure.

For the European Union all of this would imply that its role in science and technology policy should primarily be to encourage border-crossing research cooperation and exchange. The uncoordinated industrial policy approaches of individual member states can be seen as a field of experimentation where the most promising approaches will flourish.

In many areas this decentralised approach can be successful. But there are also fields where it does not go far enough. Firstly, there are projects in research and development where scale is crucial, sometimes simply due to high costs. One example is the nuclear fusion reactor project ITER located in Southern France. The project is simply too large for individual countries. It is financed by thirty five nations, including not only the European Union but also the United States, Russia, and China. The example of ITER suggests that even the European Union may be too small for certain types of projects; but the European Union can do more than the member states. Secondly, in cases where research and development has a clearly defined objective like a specific application of a technology, uncoordinated research may lead to duplication and be wasteful.[21]

Thirdly, there may be cases of strategic interaction among countries or blocs of countries. Suppose a country like China focuses on achieving leadership in a specific technology like artificial intelligence or electric mobility. Assuming that individual EU member states are too small to compete, what is the optimal response of the European Union? One option is to do

Figure 4.13
Research and Development Spending in the European Union



Source: OECD Science, Technology and R&D Statistics.
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[21] One should take into account though that competition among researchers is an important driver for innovation and success in research. Therefore duplication should only be an issue when it comes to very specific and clearly defined research and development processes.

nothing and either expect that individual member states compete; or accept that China will lead the development of this technology. This may imply that China also defines industry standards in this area in a way that gives Chinese companies a long-term competitive advantage. But the European Union may invest in other technologies. Alternatively, the European Union may compete, invest heavily, and try to win the race for the new technology and the standard setting. This may be very costly and there is no guarantee of success. Yet, another strategy may be to focus on other fields, but make sure that frontier technologies developed in China will be understood by European companies and researchers and can be adopted quickly in Europe.

After all, it should not be overlooked that scientific knowledge has the attributes of a public good. Being at the frontier of technological development and innovation is costly. In some fields it may be more efficient to invest in the ability to adapt technologies developed by others, participate in the design of industry standards and the application of the technology. Acemoglu et al. (2017) suggest that adaptation and imitation can be as successful economically as a strategy that leads to technological leadership. In the important area of standard setting, which is closely linked to research and development but not the same, the European Union should also be active and alert about processes in other countries. In many cases this could be an area where cooperation with the United States would be fruitful.

It should also be taken into account that many new technologies imply heavy investment in intangible assets and cost structures where fixed costs are high and marginal costs are low or close to zero. The digital economy is a good example. In such a setting, countries or companies investing heavily to introduce new technologies face the risk that other countries use tax and regulatory instruments to capture part of the rents generated through the sale of the product or service in their home market. This problem is very familiar from pharmaceutical regulation. The development of new drugs and therapies has very high marginal costs, and price regulation for drugs needs to give companies a margin to recover their fixed costs. Providing this margin and preserving the incentives for research and development can be seen as an international public good. Small countries in particular have few incentives to contribute to the provision of this good. Another example is the EU initiative to introduce a turnover tax on digital services. If marginal costs are zero, turnover taxes are fully shifted to producers; and their effect is similar to a lump sum tax on profits.

These considerations suggest that the EU's science and technology policy should not necessarily join contests about who will be first to develop specific technologies, but ensure that European researchers and companies are involved in the process of developing these technologies, and will be able to adapt and apply them quickly if others develop them first. The second focus would be to create an environment in Europe that favours entrepreneurship and innovation. Here the deepening of the European Internal Market is a key challenge. To be successful, many innovations need a large market, so that new products or business models can quickly reach sufficient scale. The availability of a deep capital market is another key ingredient. Thirdly, more needs to be done to improve border crossing infrastructure networks for data, telecommunication, energy, and transport.

4.6 CONCLUSIONS

The external environment in which the European Union operates is changing markedly. Relations with the United States have been shattered as a result of the policies of Donald Trump. This may not be a permanent change, but hoping that US policy towards Europe will return to normal after the next US presidential elections may be optimistic. If Brexit happens, and particularly if there is a hard Brexit without a withdrawal agreement, relations between the United Kingdom and the European Union will be damaged seriously and both sides will pay a high cost. At the same time, Europe faces an increasingly influential China, which is becoming more assertive politically and economically. Its growing markets and rising middle classes provide opportunities for European producers and exporters. But its advancing technical knowledge creates challenges. Meanwhile, Europe is being challenged by the populist and nationalist turn taken by the United States under the presidency of Donald Trump; and by the emergence of similar tendencies in several European countries. The European Union is one of the remaining bastions of the rules-based, multilateral, international order. It needs to make common cause with like-minded partners such as Japan, India, Australia, Canada, South-East Asian nations, and, as far as possible, China.

The shift in US policy towards protectionism and its (justified) demands for a greater contribution of its European allies to NATO's defence effort imply that Europe needs to do more. Using synergies offered by common EU defence policies would be highly desirable.

Brexit will diminish the size of the European internal market, but there are strong incentives for both sides to continue to cooperate. To make this possible, it is of key importance to avoid a hard Brexit.

The rise of China and the growth of trade and capital flows offer enormous potential for economic gains for both sides; but growing economic exchanges also require the ability to adjust. The European Union needs to be in the position to use access to its internal market as leverage to maintain open markets for its companies in the United States, China, and worldwide. The European Union needs a more consistent approach to dealing with foreign investment. The European Union should remain open to foreign investment, one of the side effects of which is that deep mutual relations through investment reduce the likelihood of political or military conflict. But foreign investors' access should be linked to the reciprocal treatment of European investors in the relevant partner country.

Investments made by Chinese companies with opaque relationships with the Chinese state, such as Huawei, for example, may present risks to security, and it is appropriate for member states and the European Union to anticipate these risks. The new European framework for screening FDI is a step in the right direction. It is important that it does not become too bureaucratic and slow. The criteria for intervention should be specified more clearly. Currently, they are so vague that the procedure may be prone to lobby influence and protectionism.

The rise of China as a leading power in science and technology, combined with the introduction of new standards in the application of new technologies, may threaten the competitiveness of European companies. The European Union should not necessarily engage in races for dominance in particular technologies, but it should ensure that European companies and researchers are sufficiently involved in the development of key technologies to facilitate their speedy adaptation. The European Union needs to do more to create favourable conditions for progress in science, technology, and innovation, deepening the internal market, including capital markets. Improving border-crossing networks for data, communication, energy, and transport should be a priority.

The European Union will only be able to deal with these challenges successfully if its member states are willing to cooperate more and pool their sovereignty in fields where individual action is not enough.

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