

## SPECIALS

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How venture capitalists may impair the entrepreneurial ecosystem throughout their investment process

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## SPOTLIGHT

World economic outlook for 2019 and 2020

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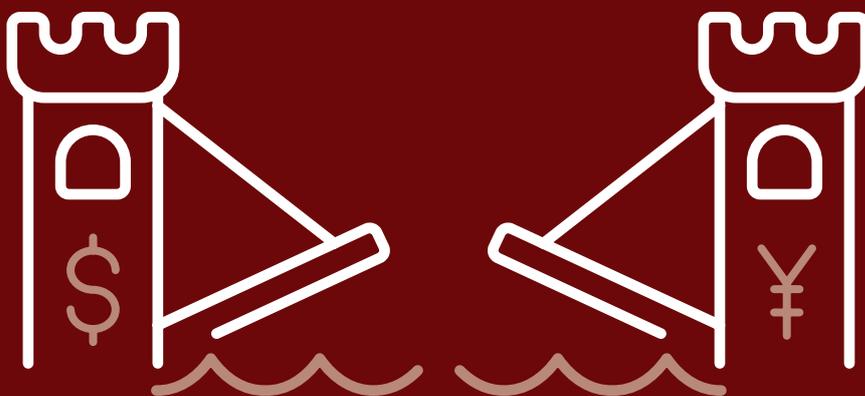
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## FOCUS

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# The US-China trade war

Stormy-Annika Mildner and  
Claudia Schmucker\*

## The battle of the giants: US trade policy vis-à-vis China

### INTRODUCTION

US President Donald Trump sees China as a major economic adversary—and he has done so for quite a long time. In an interview in 2015, he stated: “because it’s an economic enemy, because they have taken advantage of us like nobody in history. They have; it’s the greatest theft in the history of the world what they’ve done to the United States. They’ve taken our jobs”.<sup>1</sup> In a similar tone, Trump’s National Security Strategy of 2017 criticizes that China challenged American power, influence, and interests, attempting to erode American security and prosperity.

Many share Trump’s threat perception in the United States. According to a report of the polling institute Pew Research Center, a majority of Americans view China unfavorably. The top issues Americans are concerned about include the large US debt held by China, cyberattacks from China, the country’s impact on the global economy, the loss of US jobs to China, and the US trade deficit.<sup>2</sup>

The United States has had a large deficit in merchandise trade with China for many years. Amounting to USD 382 billion in 2018, the deficit in trade in goods is higher than that with any other country in absolute numbers.<sup>3</sup> Trump finds the causes mostly in unfair trade practices abroad: subsidization of domestic companies, overcapacities, forced technology trans-

fer, and theft of intellectual property rights. But the trade conflict is about much more than the US trade deficit; it is about power and economic dominance. This was reinforced by the Made in China 2025 strategy, which aims to make the country a ‘manufacturing superpower’.

In parts, Trump is right (although, without doubt, the trade deficit has many causes, which rather lie within the United States). China has become a heavyweight in the world economy but has yet to assume responsibility for the global economic order. Quite the contrary: the country frequently fails to adhere to the rules of the World Trade Organization (WTO) and its own accession protocol to the organization.

Nonetheless, Trump’s goals are fundamentally flawed. The President wants to ‘decouple’ the United States from China, or in other words, massively reduce the interdependence between the two countries. Not only will this strategy not work, the policies of the President are dangerous and could easily backfire. Trump’s tariff war has already taken its toll both in the United States and globally. While China has made some concessions, none of these are legally binding. Any US-China deal is unlikely to address the underlying problems, rooted in China’s economic model. What’s more, it will not end the competition between the two superpowers for dominance in the international system.

### NEITHER CAN DO WITHOUT THE OTHER: ECONOMIC INTERDEPENDENCE

If President Trump aims to decouple the United States from China, he is bound to have a tough time. US-China economic ties have expanded substantially since the two countries began to normalize their relationship in the late 1970s. With China’s accession to the WTO in 2001, the interdependence between the two superpowers has only accelerated.

With an export value of USD 188 billion, China is the third most important market for US goods and services after Canada and Mexico (8% of total). Regarding imports of goods and services, China ranks first (USD 523.7 billion), which makes the



Stormy-Annika  
Mildner  
Federation of German  
Industries, Berlin



Claudia Schmucker  
German Council on  
Foreign Relations,  
Berlin

\* The opinions expressed in the article belong solely to the authors.

<sup>1</sup> Stracqulursi, V., *10 Times Trump Attacked China and Its Trade Relations with the US*, abcNEWS, 9 November 2017, <https://abcnews.go.com/Politics/10-times-trump-attacked-china-trade-relations-us/story?id=46572567>.

<sup>2</sup> Winke, R. and K. Devlin, *As Trade Tensions Rise, Fewer Americans See China Favorably*, 28 August 2018, <http://www.pewglobal.org/2018/08/28/as-trade-tensions-rise-fewer-americans-see-china-favorably/>.

<sup>3</sup> Source: US Census Bureau, <https://www.census.gov/foreign-trade/balance/c5700.html>.

**Table 1**  
**The ascent of China within the world economy 1990–2017**

Share of world GDP measured at PPP (%)		US	EU28	China
1990		21.8	27.4	4.1
2001		20.2	23.5	7.8
2017		15.3	16.5	18.2
Share of world trade in goods and services (%)		US	EU28	China
1999	Exports	13	42	3
	Imports	17	42	3
2005	Exports	10	40	6
	Imports	15	40	6
2017	Exports	10	36	11
	Imports	13	34	10
Share of world FDI stocks (%)		US	EU28	China
1990	Inward	25	40	1
	Outward	32	43	0
2001	Inward	34	32	3
	Outward	32	42	0
2017	Inward	25	29	5
	Outward	25	34	5

Sources: IMF; WTO; UNCTAD.

country the most important overall trading partner for the United States (in the case EU countries are considered separately; if the EU is taken as a whole, the EU is the most important trading partner of the United States).<sup>4</sup>

The United States runs a significant trade deficit with China. While US imports from China expanded rapidly in the first years of this millennium, import growth met a first dent in the mid of the financial crisis in 2009; a second dent occurred in 2016. Nonetheless, imports of goods from China to the United States reached a new record high of USD 506 billion (2.6% of GDP) in 2017. The bilateral deficit in trade in goods amounted to USD 376 billion, or 1.9% of GDP in 2017 (see Figure 1). When considering trade in goods and services separately, the picture looks slightly different: the United States is consistently running a surplus in trade in services with China. Growing significantly since 2008, the surplus amounted to USD 40 billion in 2017 alone.<sup>5</sup>

The large deficit with China has many causes, such as the role of the US dollar as dominant global reserve and transaction currency, the size of the US market and its attrac-

<sup>4</sup> Source: Bureau of Economic Analysis, <https://www.bea.gov/data/intl-trade-investment/international-trade-goods-and-services>.

<sup>5</sup> Source: Bureau of Economic Analysis, <https://www.bea.gov/data/intl-trade-investment/international-trade-goods-and-services>.

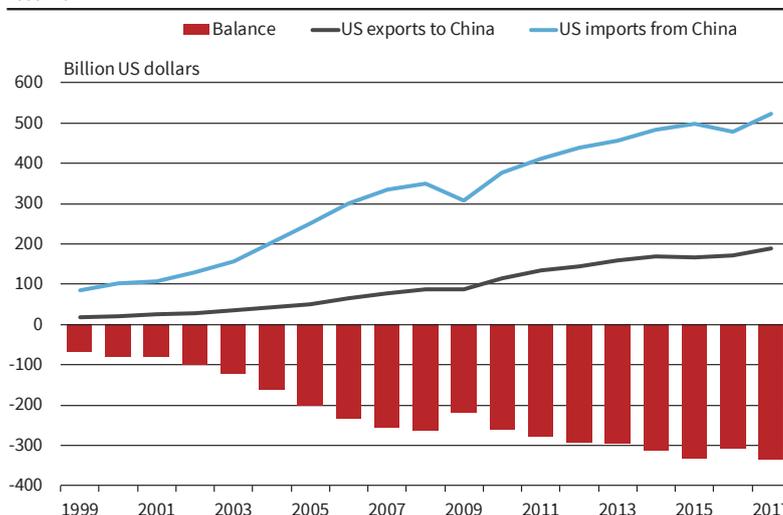
tiveness for foreign capital, US consumer spending and saving behavior, as well as macroeconomic policies, to name a few. In addition, the sharp increase in US imports from China can be explained by the relocation of production facilities from other (primarily Asian) countries to China. Furthermore, it has a lot to do with the country's place in global value chains. According to a study by the OECD and WTO (2015), 32.2% of the overall value of China's gross exports (40.2% for China's total manufactured exports) was comprised of foreign imports in 2011. Furthermore, US companies localize in China in order to better serve the local and Asian mar-

kets. This type of US production is not reflected in trade statistics and balances.

The widening bilateral trade deficit can also be attributed to strong economic growth, high employment rates, and stable domestic demand in the United States. At the same time, there was a considerable decline in US exports to China in certain sectors such as machinery and equipment, fuel and agriculture products, starting July and August 2018 subsequent to the implementation of retaliatory tariffs in China.

Financial interdependence is also increasing, although China still does not rank among the top five destinations or sources of foreign direct investment (FDI) for the United States, neither in stocks nor in

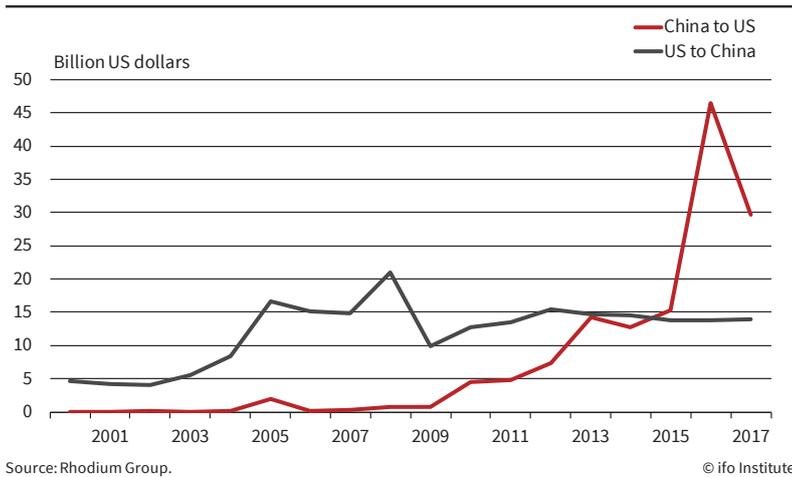
**Figure 1**  
**US-China trade in goods and services**  
1999–2017



Source: Bureau of Economic Analysis.

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**Figure 2**  
**FDI flows in all industries between the United States and China**  
 2000–2017



Source: Rhodium Group.

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flows.<sup>6</sup> In 2017, China ranked 13th regarding US FDI stocks abroad and 9th concerning outward flows. In the same year, China placed 15th in FDI stocks in the United States. As FDI flows from China to the United States were negative in 2017, the country placed only 126th.

FDI flows between the United States and China (in both directions) stood at USD 43.47 billion in 2017. While this is the second-highest year to date, it marks a 28% drop from the USD 60 billion total in 2016. This decline was due to a change in Chinese policy, tightening controls on outbound investment, as well as heightened investment screening undertaken by the Committee on Foreign Investment (CFIUS) in the United States. Although Chinese FDI flows to the United States overtook US-to-China flows in 2015, American FDI stocks in China are historically and consistently higher, at USD 256.5 billion from 2000 to 2017, compared to USD 139.8 billion (China to US) over the same time period. For China, FDI sourced from the United States ranked in sixth place. The Chinese statistics, however, are significantly skewed as the biggest investor is identified as Hong Kong with a share of 75.5% of all FDI inflows.<sup>7</sup>

China is the greatest creditor of the United States. In December 2018, China held USD 1.124 trillion in US Treasury securities (17.9% of securities issued). The high

<sup>6</sup> Numbers for FDI flows from the Bureau of Economic Analysis (financial transactions without current cost adjustment), unless otherwise indicated.

<sup>7</sup> Ministry of Commerce People's Republic of China, *News Release of National Assimilation of FDI From January to December 2017*, [http://www.fdi.gov.cn/1800000121\\_49\\_4690\\_0\\_7.html](http://www.fdi.gov.cn/1800000121_49_4690_0_7.html).

percentage of US debt owned by China highlights once again the mutual dependency of the two economies. A rapid Chinese sell-off, for example, of Treasury securities would harm both parties, as the interest on Treasuries would rise while their price would go down, thereby decreasing their value.

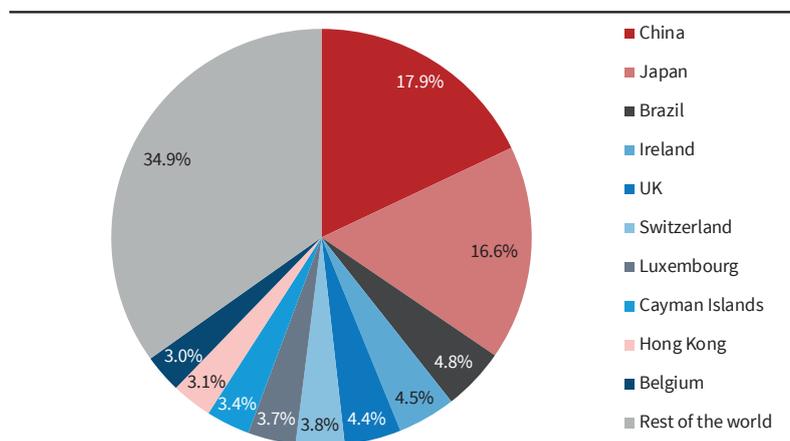
**WHO WILL BLINK FIRST? TIT-FOR-TAT PROTECTIONISM**

President Trump wants to place America first. According to his Trade Policy Agendas of 2018 and of 2019, trade

policy must focus more on the national interests of the United States and for this reason must be in harmony with the country's national security strategy. The National Security Strategy of 2017 states: "we will insist upon fair and reciprocal economic relationships to address trade imbalances" (Whitehouse 2017, 4).

The Trump administration is thus much more aggressive than many of its predecessors, rigorously applying national trade laws. One such law is the Trade Act of 1974. Under Section 301 of that law, the president can take retaliatory measures, including tariffs and quotas, if a country denies the United States its rights under a free trade agreement or takes measures that are unjustified, unreasonable, or discriminatory. Another of these laws is the Trade Expansion Act of 1962 with its Section 232, which allows tariffs for national security reasons. Trump has already imposed tariffs on steel and aluminum imports; an investigation of car imports is pending.

**Figure 3**  
**Foreign holders of US securities**  
 December 2018



Source: US Department of Treasury.

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Table 2

**Degree of trade openness: United States and China**

	Simple average final bound tariff rate: total trade	Simple average final bound tariff rate: agricultural trade	Simple average final bound tariff rate: non-agricultural trade	Simple average MFN applied tariff rate (2017): total trade	Simple average MFN applied tariff rate (2017): agricultural trade	Simple average MFN applied tariff rate (2017): non-agricultural trade
US	3.4	4.9	3.2	3.4	5.3	3.1
China	10.0	15.7	9.1	9.8	15.6	8.8

Source: WTO

China ranks top on Trump's agenda. The country's market is much less open than that of the United States. In terms of the simple average MFN applied tariff rates, China's rates are approximately three times those of the United States for total trade (9.8% vs. 3.4%) and both agricultural (15.6% vs. 5.3%) and non-agricultural trade (8.8% vs. 3.1%). Differences are starkest in seven categories (China's tariff rates are ten or more percentage points higher than those of the United States): cereal and preparations, cotton, sugars and confectionary, animal products, coffee and tea, other agricultural products, and fish and fish products.

In its Foreign Trade Barriers Report 2018, the United States Trade Representative (USTR) identified several areas of concern (Lighthizer 2018). Pointing at 'Made in China 2025', a long-term strategy targeting ten strategic industries, the USTR criticizes that domestic companies—especially state-owned enterprises (SOEs)—are protected and promoted by a wide range of industrial policies. The report further criticizes the numerous restrictions on the level and types of FDI allowed in China, the joint-venture obligations, and forced technology transfer. Violations of intellectual property rights are another area of concern. The United States is also disappointed with China's mixed implementation record of WTO obligations. For example, it still employs export restrictions like export tariffs and has yet to join the Government Procurement Agreement.

The UNCTAD finds that out of seven categories of non-tariff measures imposed on all UNCTAD members, the United States has imposed measures for only one category more frequently than China (sanitary and phytosanitary measures). Most notably, China has imposed 553 more export-related measures and 1,628 more technical barriers to trade than the United States.

It thus does not come as a surprise that the United States and China have been engaged in several trade conflicts. Between 2001 and 2018, the United States has filed 64 dispute settlement cases before the WTO against 18 countries and the European Union, with the highest number (23) against China, followed by nine against the EU. In contrast, in the same time period, China has filed only 22 cases against three countries and the Euro-

pean Union, 15 of which were against the United States.

Of the dispute settlement cases filed by the United States against China, ten involved violations of Article VI of the General Agreement on Tariffs and Trade (1994), the article that deals with anti-dumping remedies, and of the Agreement of Subsidies and Countervailing Measures (otherwise known as the SCM Agreement), which covers illegal subsidies and countervailing. The other 13 cases filed by the United States against China primarily cited violations of the GATT (1994) and GATS, the Protocol of Accession, and the Agreement on Trade-Related Aspects of Intellectual Property Rights. Of the cases filed by China against the United States, eight cases (53%)—more than half—cited violations of GATT Article VI, also concerning the methodologies used by the United States in anti-dumping proceedings against China. In 2018 alone, China filed as many complaints as ever before against the United States, including the complaint against recent safeguard measures on silicon photovoltaic products as well as the tariffs on steel and aluminum.

While relations between the United States and China have thus been strained for years, recently they have worsened considerably. In late 2018, Kevin Hassett, chairman of the President's Council of Economic Advisers, said China had 'misbehaved' as a member of the WTO and hinted that there might be a case for evicting the country from the WTO.

In early July 2018, the United States imposed import duties of 25% on Chinese imports worth USD 34 billion on the basis of Section 301. The duties relate primarily to high-technology product groups such as aircraft parts, batteries, flat-screen televisions, and specialist medical equipment—products that China has identified as being particularly important in its Made in China 2025 strategy. The Chinese government immediately imposed retaliatory tariffs covering a trade volume of around USD 30 billion. Trump turned up the heat by extending tariffs to imports worth USD 16 billion in late August 2018. Again, China imposed retaliatory tariffs, also covering a trade volume of around USD 16 billion.

A few days after the first 301 tariffs, the USTR published a further list featuring 6,000 Chinese merchandise goods. The list comprised a trade volume of USD 200 billion, on which duties of 10% were

levied in late September 2018. The tariffs were to increase to 25% starting on January 1, 2019. In total, US imports from China worth USD 250 billion, or almost 50% of US goods imports from China in 2017, are now burdened with additional tariffs. Trump has repeatedly signaled that, if necessary, tariffs could be imposed on imports from China worth USD 500 billion.

When the United States and China reached a ceasefire at the G20 summit held in Buenos Aires late 2018, the United States agreed to hold off on plans to raise tariffs from 10% to 25% on Chinese imports. The two countries also agreed to negotiate a deal on issues such as intellectual property protection, forced technology transfers, non-tariff barriers, and cyber theft of trade secrets until March 1, 2019. China committed to increase imports of agricultural, energy, industrial, and other products from the United States to gradually ease the trade imbalance.

In early January 2019, when the two superpowers met in Beijing to work on the details of the deal, the Trump administration showed optimism—without doubt also to calm the stock markets. The Chinese government announced that it would open China's market for five genetically modified crops, which the United States had demanded for years. However, differences persisted over more complex issues such as the protection of intellectual property and subsidies to Chinese SOEs. USTR Lighthizer and Secretary of Commerce Ross emphasized that China needed to credibly commit to buying more US goods and services but also pursue a serious reform agenda. They further asserted that any agreement needed to encompass a monitoring and enforcement mechanism. On the 25th of February 2019, Trump announced to extend the deadline of 1 March 2019, because the negotiations with China had made 'substantial progress'. Both sides stressed that they had reached a deal on cur-

rency manipulation and were negotiating additional agreements on agriculture, services, non-tariff barriers, intellectual property rights, forced technology transfers and cyber security. However, it remains unclear, how far-reaching and enforceable the final deal will be.

## PUBLIC OPINION ON CHINA

President Trump is not alone in perceiving China as a threat. According to the aforementioned Pew survey, there has been a general downward trend since 2011 in the number of Americans who view China favorably (see Figure 4).

Americans are concerned about both economic and political issues. Compared to 2017, there was a 6% increase in the number of Americans who believe that China's economic power is of greater concern to the United States, and a 7% decrease in those who believe that Chinese military might is more concerning. This corresponds with Trump's increasingly tough rhetoric on China's trade surplus.

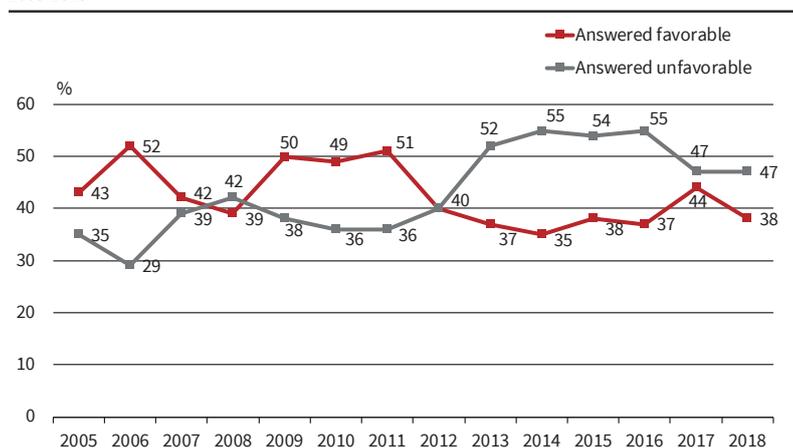
There are marked partisan differences. Republican respondents tend to be more worried about the threat posed by China's economic strength (American debt held by China, loss of US jobs, the trade deficit) while Democrats are more concerned with China's impact on the global environment, on human rights, and the tensions between China and Taiwan.

Public opinion on Trump's trade policy measures *vis-à-vis* China is much less decisive, on the other hand. Again, respondents are divided along partisan lines. According to a 2018 Gallup poll, more Republicans foresaw short-term positive effects on their family's financial situation than Democrats (11% to 2%); and more Republicans (28% to 5%) than Democrats believed they were helpful to the US economy. Some 57% of Democrats found them to be detrimental to the American economy, compared to only 16% of Republicans

polled. This strong partisan divide can partially be attributed to the polarization in the United States, currently at an all-time high—but it remains an interesting new trend. Thus, traditionally, Democrats were more skeptical regarding free trade than Republicans.

The business community is strongly critical of Trump's trade policy, but shares many of his views on China. The US Chamber of Commerce, for example, has taken a clear stance against the new tariffs, calling them "the wrong approach to

Figure 4  
American opinions on China (favorable vs. unfavorable view of China)  
2005-2018



Source: Pew Research Center.

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address unfair trade practices”.<sup>8</sup> The farm sector has been hit particularly hard by the tariff conflict. It is thus not surprising that the American Farm Bureau Federation (AFBF) also urged US trade officials to “engage in discussions with our trade partners to resolve trade concerns before resorting to tariffs”.<sup>9</sup>

The risks of Trump’s trade policy are great. But did this lead to a change in voting behavior in the latest mid-term elections held in November 2018? The Brookings Institution highlighted the geographical effects of retaliatory tariffs on the United States. Substantial job losses are to be expected, particularly across rural and mid-western states (especially Michigan, Indiana, Ohio, Illinois, and Pennsylvania), affecting the traditional manufacturing base (foremost automotive production), as well as production hubs for corn and soybeans. Out of the ten most affected states, only one was won back by the Democrats in the mid-terms: in Minnesota, the Democrats gained control of the State House of Representatives. In Pennsylvania and Michigan, the Republicans defended the Senate and House, but the Democrats were able to reduce the margin. Thus, despite its risks to the national economy, Trump’s trade policy seems not to have had a major impact on voting behavior in the recent mid-term elections.

### CONGRESS AND CHINA

In Congress, views on China are fairly consistent across partisan lines. Many prominent Democrats agree with Trump regarding China’s unfair trade practices. Ahead of the G20 Summit, Democratic Senate Minority Leader Chuck Schumer (D-NY), Senator Ron Wyden (D-OR), and Senator Sherrod Brown (D-OH) criticized China’s ‘predatory’ practices and urged the President to take aggressive actions against Chinese “efforts to steal and extort US intellectual property”.<sup>10</sup> According to Schumer, “China is our real trade enemy, and their theft of intellectual property and their refusal to let our companies compete fairly threatens millions of future American jobs”.<sup>11</sup> Democratic Speaker of the House Nancy Pelosi (D-CA) called the tariffs a ‘leverage point’, stating that the United

States “must take strong, smart and strategic action against China’s brazenly unfair trade policies”. She also spoke out against human rights violations in China.<sup>12</sup>

However, there are also critical Democratic voices: for example, the new Chairman of the House Ways and Means Committee, Richard Neal (D-MS), criticized the seemingly erratic imposition of tariffs against Chinese imports. Many Republicans, including Senate Majority Leader Mitch McConnell (R-KY) and the former Republican Chair of the House Ways and Means Committee Kevin Brady (R-TX), have similarly called for more aggressive actions against China. In general, the House Republicans seem to be more in line with the President’s trade policy towards China, while many Republican Senators are more skeptical. The Senators Mitt Romney (R-UT), Bob Corker (R-TN), and former Senator Orrin Hatch (R-UT) have all spoken in opposition of the tariffs.

That the majority of Congress is tough on China is underlined by two legislative reforms in 2018 on investment screening (FIRRMA) and export control (ECA), both passed within the National Defense Authorization Act (NDAA) with bipartisan support. Thus, Congress expanded the powers of CFIUS, which carries out the screening of foreign investment for national security reasons. Covered transactions now include real estate acquisitions in sensitive areas and non-passive but non-controlling investments in US businesses involving sensitive personal data, critical infrastructure, or critical technology. The reform of export control of dual-use items was met with similar support. It explicitly calls on the president to use export controls to maintain US economic leadership in science and engineering, industry, and basic research. Furthermore, the ECA transfers the competence for export control permanently to the president. A cross-departmental body under the direction of the DOC is to identify technologies that are relevant to national security and that are not already covered by FIRRMA as sensitive technologies.

### THE FUTURE OF THE MULTILATERAL TRADING ORDER

Apart from the bilateral trade tensions, the United States pursues a second line of attack against China in the context of the WTO. Many of the complaints that the United States has expressed against the functioning of the WTO are more or less directly related to China. As such, the future of the multilateral trading order very much hinges on the two adversaries. The Trump administration is frustrated with the functioning of the WTO dispute settlement system, in particular the Appellate Body. Another point of contention

<sup>8</sup> See US Chamber of Commerce, *International Trade and Investment*, <https://www.uschamber.com/international-trade-and-investment>.

<sup>9</sup> American Farm Bureau Federation, *Farm Bureau Details Trade, Tariff Impacts on Agriculture*, 17 September 2018, <https://www.fb.org/news/farm-bureau-details-trade-tariff-impacts-on-agriculture>.

<sup>10</sup> Senate Democrats, *Ahead of G-20 Summit, Schumer, Wyden and Brown Urge President Trump to Not Back Down on Further Action against China for Sake of Weak and Meaningless Agreement*, <https://www.democrats.senate.gov/newsroom/press-releases/ahead-of-g-20-summit-schumer-wyden-and-brown-urge-president-trump-to-not-back-down-on-further-action-against-china-for-sake-of-weak-and-meaningless-agreement>.

<sup>11</sup> Senate Democrats, *Schumer Statement on New Tariffs on Chinese Imports*, <https://www.democrats.senate.gov/newsroom/press-releases/schumer-statement-on-new-tariffs-on-chinese-imports>.

<sup>12</sup> *Pelosi Statement on Trump Administration’s New Tariffs on China*, Congresswoman Nancy Pelosi, <https://pelosi.house.gov/news/press-releases/pelosi-statement-on-trump-administration-s-new-tariffs-on-china>.

is the inability of the organization to deal with trade distorting measures by non-market economies such as China. Furthermore, the Trump administration is unhappy with a deadlocked negotiating pillar and a lack of transparency due to a disregard of the notification requirements.

If the United States continues to block the appointment of members to the Appellate Body, there will be less than three members left in December 2019, which is the minimum number required for an appeal. Without a functioning Appellate Body, any party to a dispute can block the adoption of panel rulings by appealing them. This undermines the whole WTO dispute settlement procedure. US concerns refer to: (a) the disregard for the 90-day deadline for appeals (Art. 17.5); (b) continued service by persons who are no longer Appellate Body members (Rule 15); (c) the issuing of advisory opinions on issues, which are not necessary for the solution of the dispute; and (d) supposed judicial overreach by treating reports as precedents.<sup>13</sup> In September, the EU proposed concrete reform measures addressing many of the aforementioned concerns (European Commission 2018). The EU proposal is now officially sponsored by eleven other countries, including China, Canada, India, Australia, South Korea, Singapore and Mexico. So far, the United States has objected to the reform proposals, so the future of the Appellate Body is still undecided.

The Trump administration further criticizes the WTO for not being sufficiently equipped to prevent market-distorting practices. US frustration is exacerbated by rulings of the Appellate Body. In its ruling of March 2011 on Chinese SOEs and the use of anti-dumping and countervailing measures, the Appellate Body issued a very narrow definition of what constitutes a 'public body'. Contrary to US reasoning, the ruling states that a 'public body' needs to 'possess, exercise, or be vested with governmental authority'. This does not cover SOEs, although they are controlled by the Chinese government. The US claims that this restrictive definition reduces the scope of the WTO SCM Agreement and puts an additional burden on any country, which wants to issue countervailing duties to provide adequate data. The European Union and Japan share many concerns regarding trade-distorting measures. In response, the three partners created a Trilateral Initiative at the WTO Ministerial Conference in Buenos Aires in December 2017.<sup>14</sup> On January 9, 2019 EU Trade Commissioner Malmström, USTR Lighthizer, and Japanese Minister of Commerce and Trade Seko met once again in Washington, DC. According to a joint state-

ment, the three countries agreed to deepen cooperation in the areas of industrial subsidies, third-country non-market-compliant practices, forced technology transfer, e-commerce, and WTO reform. This important work needs to be continued and deepened and carried over to other global governance fora.

The United States is also unhappy with the lack of progress in the negotiating pillar of the WTO, namely the Doha Development Agenda (DDA). The United States has long since lost interest in the multilateral negotiations rounds, as the large emerging market economies such as China and India failed to make any ambitious concessions. The Ministerial Conference in Buenos Aires in December 2017 was therefore a breakthrough, because members including the United States and others broke with the concept of single undertaking and opened the way for plurilateral agreements in the areas of e-commerce, services, investment facilitation, and MSMEs. USTR Lighthizer underlined: "MC11 will be remembered as the moment when the impasse at the WTO was broken. Many members recognized that the WTO must pursue a fresh start in key areas so that like-minded WTO members and their constituents are not held back by the few members that are not ready to act".<sup>15</sup> The plurilateral agreements are one way forward to keep the United States engaged (even though the country participates in only two of them) and to negotiate modern trade rules that are relevant for the new realities in trade. Central to US frustration with the WTO is further the definition of developing countries and the special and differential treatment that comes with it: there are no WTO criteria; countries self-determine whether they are a developing country or not. In September 2018 the Trilateral Initiative therefore called on advanced emerging economies to "undertake full commitments in ongoing and future WTO negotiations".<sup>16</sup> In November 2018, China also issued a proposal how to reform the organization. Even though it stressed its support for reform, it opposed any changes to its developing-country status. Underlining the interests of developing members, China pointed at the problem of agriculture subsidies of industrialized countries (such as the United States) instead.<sup>17</sup>

A fourth point of contention for the United States is the unwillingness of members such as China to comply with the notification requirements. As part of the Trilateral Initiative, the United States together with the EU and Japan criticized that the present lack of transparency regarding subsidies

<sup>13</sup> See the USTR's 2018 *Trade Policy Agenda and the 2017 Annual Report of the President of the United States on the Trade Agreements Program*, March 2018, <https://ustr.gov/sites/default/files/files/Press/Reports/2018/AR/2018%20Annual%20Report%20FINAL.PDF>.

<sup>14</sup> See Joint Statement by the United States, European Union and Japan at MC11, 12 December 2017, <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2017/december/joint-statement-united-states>.

<sup>15</sup> USTR Lighthizer Statement on the Conclusion of the WTO Ministerial Conference, 14 December 2017, <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2017/december/ustr-rob-ert-lighthizer-statement>.

<sup>16</sup> Joint Statement on Trilateral Meeting of the Trade Ministers of the United States, Japan, and the European Union, 25 September 2018, <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2018/september/joint-statement-trilateral>.

<sup>17</sup> See China Supports Necessary WTO Reforms: MOFCOM, 23 November 2018, [http://www.xinhuanet.com/english/2018-11/23/c\\_137627374.htm](http://www.xinhuanet.com/english/2018-11/23/c_137627374.htm).

notification had undermined the ability of WTO committees to properly fulfill their monitoring function. Therefore, the partners co-sponsored a transparency and notification proposal at the WTO Council on Trade in Goods. This is a first step to improving the monitoring function. However, in the end, the WTO SCM Agreement must be updated.

### OUTLOOK: GO-IT-ALONE IS BOUND TO FAIL

Trump's China policies are rightly controversial. But will the president change his course? This is anything but certain. Not just Trump, but also his key economic advisors perceive China as an adversary. Congress supports a tough stance towards the country. While polls show that a majority of Americans objects to Trump's tariff war, this did not lead to a major change in voting behavior in the latest mid-term elections. The United States experienced dynamic economic growth in 2018, and employment is strong. Many analysts expect a slowdown in 2019 with increasing risks towards the end of the year and in 2020. Stock markets have already become skittish. Support for the president, which has reached a low point due to the recent government shutdown, could thus further weaken. As a consequence, Trump might ease his stance on China—or he might not. The President might try to blame the economic situation on the country's trading partners and get even tougher on China. Last but not least, the relationship with China is about much more than just economics. China has not only become an economic superpower that threatens the United States and its role as economic hegemon, it also challenges the country in security matters. The conflict is thus far from over.

Without doubt, China does not always play by the rules. This needs to change. Tit-for-tat protectionism is not the right way forward, however, as it does not address the underlying problems. The ongoing trade conflict between the United States and China has already taken its toll. In its world economic outlook of January 2019, the IMF emphasized that the risks to global growth tilted to the downside. Particularly an “escalation of trade tensions beyond those already incorporated in the forecast remains a key source of risk to the outlook”.<sup>18</sup> In addition, China's economic growth dropped in 2018 to its lowest rate since 1990.

Decoupling is not a sensible strategy. China is an important market and will remain so. Additional tariffs will make the United States neither more competitive nor secure. The Chinese market is critical to the global competitiveness of US companies, and US consumers benefit greatly from imports of lower-cost goods from China. Rather, the United States needs to invest more in education and infrastructure

and seriously address the skills gap to boost its own competitiveness.

In addition, market-distorting practices such as forced technology transfers, intellectual property rights violations, and state subsidies need to be addressed within the WTO. The organization, which for three decades has ensured predictable and open trade relations, is in dire need of reform. The Trump administration should thus engage in a constructive and serious reform debate. At the same time, the EU and the United States should work more closely together on advancing national policy instruments such as competition law to address unfair trade policies.

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<sup>18</sup> See IMF World Economic Outlook Update, January 2019, <https://www.imf.org/en/Publications/WEO/Issues/2019/01/11/weo-update-january-2019>.

Alicia Garcia Herrero

## Europe in the midst of China-US strategic economic competition: What are our options?

### INTRODUCTION

As the European Union was recovering from the deepest economic crisis since the introduction of the euro, a number of new challenges popped up. First and foremost, British citizens decided in favor of the UK leaving the European Union in June 2016, and a growing number of countries saw anti-European and/or populist parties increase their representation in national parliaments – in Italy’s case, even going so far as to form a government.

Beyond those internal problems, another external shock has hit the EU in 2019, namely the trade war between the United States and China. US-led trade protectionism against China affects the European Union in several ways. First and foremost, it puts multilateralism in trade relations at risk and, in particular, the proper functioning of the WTO (Jean *et al.* 2018). In addition, it opens the door to additional trade protectionism. This could possibly target the EU directly, as it sits on the largest trade surplus in the world. Third, trade measures taken by the United States against China, as well as China’s retaliation, have indirect consequences for Europe. These can be positive for some sectors, as tariffs have allowed European exporters to obtain a comparative advantage over US exporters in China’s market (Garcia Herrero and Xu 2019; Wolff 2018). This is also the case, although to a lesser extent, for EU exports to the United States, since they can replace Chinese exports targeted by US tariffs. The reason why the potential gains to be made are smaller are because Chinese and European products going to the US market are not as similar as European and US exports to China, once we exclude US agriculture and energy products exported to China. However, this positive scenario becomes more blurry when we consider the complexities of the global value chain, which can lead to increases in European costs of production due to third countries’ import tariffs as long as they lie within Europe’s production chain (Chiacchio 2018). This is without doubt the case with China. In addition to the potential losses related to the EU’s participation in the global value chain, we cannot forget that the United States and China are very close to agreeing on a deal that could include a large

increase in Chinese imports from the United States, which would surely divert exports to China away from Europe.

Given the above complexities, it seems important to analyze in detail what has happened so far in the US-China trade war and beyond, as I hold the firm view that trade is just one of the facets of a much more structural—and strategic—confrontation between China and the United States. Second, we analyze the EU’s potential gains, at least at the sectoral level, from the trade measures the United States and China impose on each other. Finally, we review Europe’s strategic options in a world that tends to be increasingly divided into two blocks (China and the United States).

The paper is divided into five sections. The first offers an account of the actions taken so far in the US-China trade war. The second evaluates such actions and the third looks at their impact on Europe. The fourth section looks at the EU’s best strategy regarding the US-China trade war, and the fifth draws some general conclusions.

### AN ACCOUNT OF US-CHINA TRADE PROTECTIONISM

From seemingly untargeted measures announced in early February for solar panels and washing machines (Table 1), the United States has moved to increasingly targeted action against China. The most obvious case in point was the announcement of an additional 25% import duty to be applied to USD 50 billion worth of imported goods from China based on China’s infringement of intellectual property rights (Garcia Herrero 2018a). More importantly, about two-thirds of those import tariffs have been applied since the July 6. The speedy introduction of the announced import tariffs, without allowing for much time to negotiate a deal between China and the United States, shows the United States’ resolve to move away from the *status quo* in terms of the functioning of the global trading system, at least as far as China is concerned. On that basis, China decided to retaliate with equivalent import tariffs on US goods.

Since then, the list of Chinese imports for which the United States aims to increase tariffs has expanded to an additional USD 200 billion. Thanks to a three-month truce recently reached on the sidelines of the G20 summit, the additional USD 200 billion in goods from China do not currently face a 25% import tariff, but rather only 10%. While the latest news seems to indicate that a deal will be reached and that no additional tariffs will be imposed on the USD 200 billion in goods targeted by the United States, other actions taken by the US administration, including export bans to China and even the weaponization of the US dollar through sanctions, etc., offers a much gloomier outlook on the future of US-China economic relations.



Alicia Garcia Herrero  
Bruegel and Hong  
Kong University of  
Science and  
Technology

Table 1

**US trade measures**

Type of product	Solar panels/ washing machines	Steel / aluminum	Intellectual property (1,102 products valued at USD 50 bn)	Intellectual property (6,031 products valued at USD 200 bn)
Rules	Section 201 Import relief for domestic industries	Section 232 National security	Section 301 Intellectual property laws	Section 301 Intellectual property laws
Effective date	Feb. 7, 2018	Mar. 23, 2019	25% additional duty ef- fective Jul. 6 for 818 products (worth USD 34 bn) included in the pro- posed list on Apr. 6, 2018, and 284 products (worth USD 16 bn) effec- tive Aug. 23, 2018	Sep. 24, 2018, and increased to 25% on Jan. 1, 2019
Exemption	'GSP-eligible' developing nations <sup>a</sup>	Australia, Argentina, Brazil and South Korea <sup>b</sup>	Targeted at China	Targeted at China
Applied to China	√	√	√	√
Retaliation from China	N/A	Tariffs of up to 25% on USD 3 bn worth of 128 products includ- ing pork, fruit, nuts, and wine	25% duty effective Jul. 6 for 545 products valued at about USD 34 bn, and for 114 products valued at about USD 16 bn with no effective date an- nounced	Tariffs on USD 60 bn worth of US imports
Truce agreed to negotiate				On Dec. 1, 2018 on the G20 sidelines, additional tariff from 10% to 25% was deferred for 90 days

Notes: <sup>a</sup> Philippines and Thailand are not excluded, even though they are GSP-eligible; <sup>b</sup> Exclusions from US steel and aluminum tariffs may take 90 days.

Source: Natixis; US government.

Going back to the trade war, China's ability to retaliate on trade is obviously more limited as it does not import enough goods from the United States to match the announced USD 200 billion in import tariffs from the United States, which explains why China's second batch of retaliatory measures have been more moderate, at least in size (USD 60 billion). These measures have also been put on hold thanks to the recently agreed three-month truce.

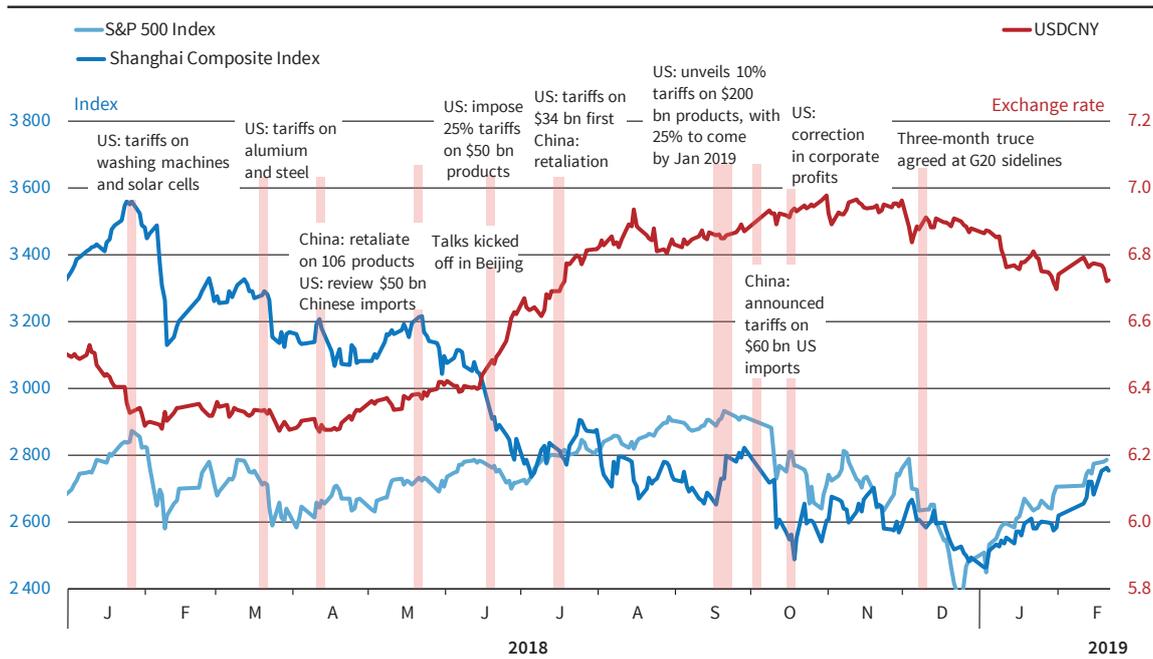
The market reaction so far seems to have been more negative for China than for the United States, at least as far as the stock market is concerned (Figures 1 and 2), which fallen by more than 25% in 2018. Furthermore, the RMB has depreciated quite substantially since the beginning of the trade war until recently, helped by the recently announced truce between the United States and China. One may wonder whether the market is overreacting to the potential consequences of such a trade war on China or, perhaps, underestimating the impact on the United States. So far, European markets seem to have remained comparatively more insulated from the US-China trade war except when the United States pointed toward protectionist measures against Europe directly, as was the case when the tariffs on steel and aluminum were temporarily lifted in spring and the threat of

import tariffs on autos and auto parts was raised in early summer.

Moving on to the potential economic impact of the trade war, there have been attempts to estimate the direct impact of tariffs on trade and thus on growth. For example, the IMF in its latest World Economic Outlook has estimated that the Chinese economy would grow 1.6 percentage points less in 2019 and the US economy would grow 0.9 percentage points less in 2019 if the trade war were to be maintained in 2019. Also, the euro area's growth rate would slow by 0.4 percent in that scenario. The World Bank, on the other hand, has a much more benign scenario in its latest global economic prospects, as it has estimated that the Chinese economy will grow only 0.2 percentage points less in 2019 and the US economy will grow 0.2 percentage points less in 2019.

Overall, the reason for this relatively limited economic impact, especially when compared with the very negative market reaction, especially for China, is that such exercises take into account only the direct effects of tariffs on trade and not indirect effects on investment through a worsening of market sentiment, among many other channels. The impact on expectations and thus future investment is probably behind the market fears, especially in China, but also in the United States and, to a lesser extent, Europe.

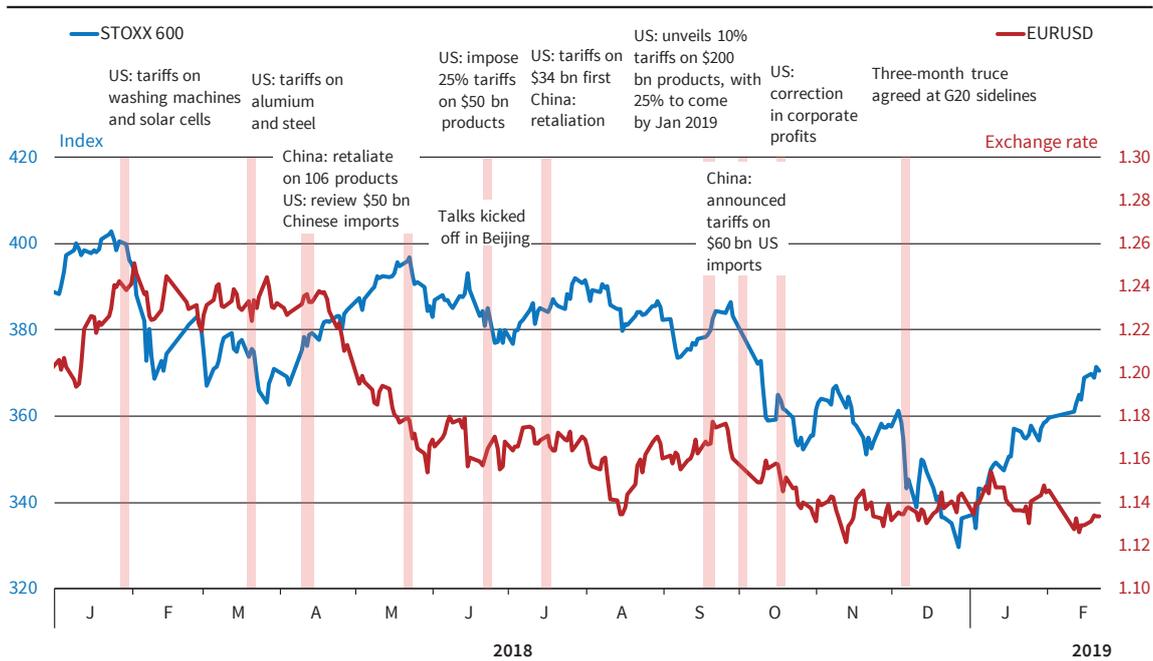
Figure 1  
Market reaction of US and China



Source: Bloomberg; Natixis.

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Figure 2  
Market reaction of Europe



Source: Bloomberg; Natixis.

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The issue is that markets may be realizing that the risk is not only of protectionism, but much more than that, as the US' ultimate goal is to try to contain China. In fact, investors both in China and abroad are starting to worry that their investments may be completely blocked by the US or indirectly affected by the worsened relationship between China and the United States (Garcia Herero and Xu 2018). Moreover, the multilateral trade

order maintained by the United States is likely to be massively transformed. If that happens, the world will have to return to a much less free system for the flow of goods and services. Increasing uncertainties are the reason investors' sentiment has become more and more negative. One way to assess the potential impact of the ongoing trade war might be to take a more detailed look at the measures taken so far and analyze their rationale

so as to draw conclusions about their potential consequences down the road.

**A DEEPER ANALYSIS OF THE TRADE MEASURES TAKEN BY THE US AND CHINA**

The analysis of the sectoral composition of the goods targeted by the US administration would support the view that the relevant structural changes happening in the global economy are due to the trade war. The first round of US tariffs (USD 50 billion) was aimed at China’s high-end exports with a view to containing China’s technological advancement, with 7% of the products being very high technology products and 55% high technology products (Garcia Herrero 2018c). Some of the items included in the US tariff list are not yet exported from China to the United States, such as aircraft and aerospace products, or arms and ammunition, so the true intention of the US tariff is not to reduce the trade deficit with China, but to keep China from moving up the technology ladder. By including products that do not contribute at all to the US bilateral deficit with China, one could argue that the United States is revealing its preferences, at least indirectly, which are to hold China back from what it wants to become, namely a technological power that competes with the United States in high-end products.

Very interestingly, China appears to have realized quite quickly what the US intention was, as it rapidly modified its own retaliation list from a more balanced one that included high-end imports from the United States (including aircraft and aerospace products) to one more focused on low-end products, such as agriculture (especially soy) and energy. Such a strategy makes sense: imposing tariffs on high-end products that China does not yet produce or that cannot be sourced anywhere else would only hurt China because it would increase the price of products needed for China to achieve its ultimate objective, namely to move up the ladder of the value chain.

Moving on to the second set of import duties announced by the United States, namely that of USD 200 billion to be imposed by the August 30, the product composition seems to be very different. In fact, low-end products dominate but, interestingly, very few of them are final – especially consumer – products (just 22% of the total) but instead are intermediate products. One could interpret this second wave of import tariffs as a way to reshore the production of

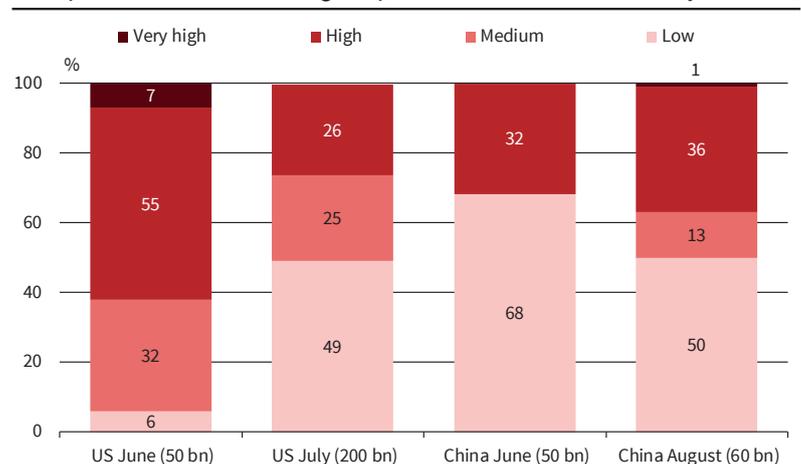
intermediate goods back to the United States (or at least to a third country that is not China) and reduce China’s role in the global value chain. This interpretation of the second round of tariffs could have tangible implications for third countries that are now part of the value chain and have better economic relations with the United States (even a free trade agreement that insulates them from increases in US import tariffs across the board). This is the case with Vietnam and Mexico (if NAFTA is finally renewed). But the United States has silently removed some key products that would be expensive to substitute in terms of price increases for the end consumer (such as white goods, for which China has become the largest supplier by far).

For this second round of tariffs, China’s retaliation is much smaller, at just USD 60 billion, due to the limitation of the total volume that China imports from the United States. Still, it accounts for a large portion of the total retaliation list that China can further extend. This round of retaliation includes all low, medium and high technology products, which shows a determined stance that the Chinese authorities will not retreat from the US threat. It also limits imports of more high technology products to China from the United States (Figures 3 and 4).

**WHAT IS THE IMPACT ON EUROPE?**

Based on the above (namely the structural nature of the trade war between the United States and China), the question to ask ourselves is how this may affect Europe. While a trade war can hardly have any winner in absolute terms, as trade is generally beneficial for global growth, there could be some comparatively worse or better outcomes depending on the country and sector. If the current dispute between China and the United States continues with punitive tariffs imposed on each other, the market space left out of the two giants’ territories

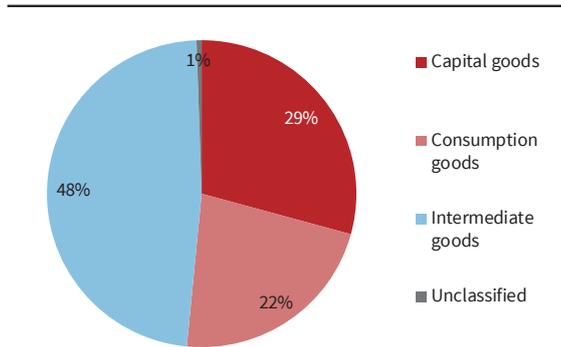
Figure 3  
A comparison of the US–China targeted products released in June and July 2018



Source: Natixis; USITC; UN Comtrade.

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**Figure 4**  
**Decomposition of US' imports from China under the 200 billion tariff list**



Source: Natixis; USTIC.

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should, to a certain extent, be filled by competitors from the rest of the world. As the biggest economic bloc in the world, the EU is, without doubt, a potential winner in this respect. The EU is currently the second largest exporter to both China and the United States. This makes EU exporters most likely to pick up the market shares of both Chinese and US companies in the midst of the trade war.

However, it is important to realize that the trade war has evolved into a more complex reality, namely a strategic competition between the two largest economies in the world (see Garcia Herrero and Xu 2019). Within that context, US expectations of China seem to be geared toward two fronts: increasing Chinese imports from the United States (not necessarily a market measure) and improving market access for US companies in China. While achieving such measures could be beneficial, especially for the United States, it is not necessarily the best outcome in all dimensions. In particular, targeted imports will create a trade diversion for China, thus reducing China's imports from the United States' main competitors, particularly Europe. Also, forcing better market access will not be sufficient to change China's key economic characteristic, i.e. state capitalism. But for the time being, China seems to have little intention of reducing it, making it unlikely that the US and the rest of the world, including Europe, will benefit from better market access (Garcia Herrero 2018e).

**OPTIONS FOR EUROPE IN LIGHT OF INCREASING ECONOMIC COMPETITION BETWEEN CHINA AND THE US**

What the US-China trade war has brought about is not only short-term trade tensions, but more impor-

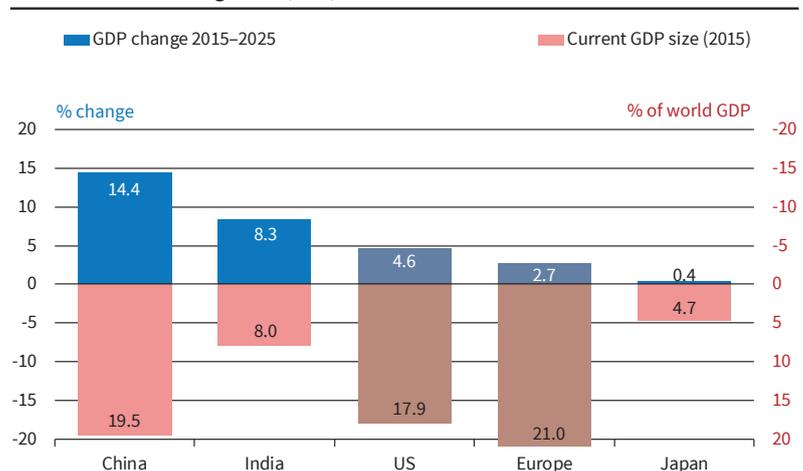
tantly, a systematic shift in the trade order that has supported the world's development for the past century. Undoubtedly, the United States and China will be the most influential blocs in the 21st century, and their conflict is doomed to be long lasting. While the two countries may find some temporary solution to the current tariff disputes, their conflicts are intrinsically embedded in the competitive stance, which could only be exacerbated in the future. This is all the more natural considering that China's economy is already as large as that of the United States (at least in purchasing power terms and soon in USD terms), but more importantly, that it will contribute over three times more than the United States to the global economy in the next ten years (Figure 5). In other words, although the United States is a more important market for Europe today, this will soon no longer be the case given the positive growth differential between the US and China, which continues to be very large.

The global influence of this US-China cold war will be persistent. At this turning point, as the world's only figure that can balance the power between the United States and China, the EU must decide how to respond to the trade war. There are several options currently under discussion.

**Safeguard Multilateralism?**

The EU has long been calling for economic multilateralism and is pushing for the reform of the WTO to adapt to China's sheer size without it having become a market economy. In fact, one could argue that one of the key points of contention on the part of the US is indeed China's following a different economic model while still being part of a free trade world. The European response to this reality is to keep, if not enhance, multilateralism by reforming existing institutions, especially the WTO, so as to impose market practices on all members

**Figure 5**  
**Contribution to world growth (PPP)**



Source: Natixis.

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in order to protect fair trade (Demertzis 2018).<sup>1</sup> This really means that the WTO will need to address the issue of the major role of state-owned enterprises in China in the production of goods and services and the pervasive role of subsidies in production. This would bring the WTO close to the US concerns over China's unfair practices in international trade.

While the EU may easily find common ground with the United States on the key issues (only if the current US administration were to engage in such reform, which is not the case now), the reform requests could be difficult to pursue with China. In fact, the role of SOEs is considered key in China's model of socialism with Chinese characteristics, and thus impossible to dismantle in the foreseeable future. China will argue that the role of SOEs remains moderate<sup>2</sup> and should thus be no issue for WTO reform. The Chinese have also borrowed the concept of competitive neutrality from the OECD and argue that they are increasingly close to applying competitive neutrality to companies operating in China. Garcia Herrero and Xu (2017) hold a very different view on the role of SOEs in the Chinese economy, both because of its more pervasive influence and, more importantly, because of their very different nature from other SOEs around the world. In fact, the key reason for their unequal footing with the rest of the companies operating in China, including private Chinese companies, is their preferential access to the market in many sectors, as well as their special connection with China's long-standing party of government, namely the Communist Party.

That said, the EU will also find the United States difficult to cooperate with on reforming the WTO. Since its arrival to power, Trump has pushed 'America first' policies and certainly not supported multilateralism. In fact, the fact that tariff measures taken by the United States are based on 'security' reasons and bypass the WTO's multilateral settlement mechanisms is a clear sign that the United States may overthrow multilateral values in its own interest. As such, while the United States seems to share more of the market and democratic values with the EU, it does not seem ready to fully conform with the EU's proposal for a WTO reform to preserve multilateralism.

Under such circumstances, it does not seem very credible for the EU to continue to push the agenda of multilateralism without the US and China. On the other hand, though, it looks extremely dangerous for the EU not to do it, as it is no longer a superpower, nor does it intend to be one. All in all, while continuing to make efforts to preserve multilateralism, Europe may need to explore other responses to the current

standoff between China and the United States, aware of the increasingly slim chance that multilateralism will become the driving force again.

### **Enhancing Europe's Reliance on the Transatlantic Alliance?**

Another potential option for Europe is to keep the *status quo* while reinforcing it on the basis of an increasing economic confrontation between the United States and China. In other words, the EU may also choose to lean completely on the United States. The question is how wise it is to do so in the current environment with clear changes in the US attitude toward multilateralism. This is all the more disappointing inasmuch as it was the United States that pushed for such a system as a way to create a safe environment for its allies and eventually to engage the rest of the world after the collapse of the Soviet Union.

The current US administration has made it very clear that multilateralism and open trade is a thing of the past. The gunfire that the United States has triggered is not only against China but against many other countries as well, including the EU. As recently as 2018, the United States threatened the EU with tariffs on steel, aluminum, and cars. It also criticized the EU for its large trade surplus with the United States. The US also criticized several EU member states for not fulfilling their economic responsibility with regard to military spending as members of NATO. As such, the EU alliance with the United States will be more costly for the EU than it has ever been, as the United States is not happy with the current distribution of costs and benefits of such a transatlantic alliance.

More importantly, because the United States has chosen a non-market bilateral path for dealing with China and other issues, the EU's complete support for the United States will mean that it has to give up on its rule-based approach to problem solving, and thus its principles. This is obviously very costly for the EU, as its own internal market is based on a strong rule-based system, but also for the world, since the EU is the bastion of multilateralism. Reform of the World Trade Organization is a clear case in point, since the EU is really holding to it and would probably not manage to do so if pushed toward a relation of clear dependence on the United States.

There is another practical reason that prevents the EU from leaning on the United States completely. The EU is not a single country, but a group of 28 countries that have different views on the United States and also on China. In fact, while Western Europe may be easier to unite against China, Eastern Europe – and also Greece and Portugal, and recently perhaps even Italy – may express opposing views on a strategic alliance with the United States that would require leaving China aside. In fact, the recent effort by

<sup>1</sup> For more details as to how Europe can defend multilateralism in the world and what the options for Europe are, see Jean *et al.* (2018) and Wolff (2018).

<sup>2</sup> According to China's National Bureau of Statistics, in 2015 SOEs accounted for 38.8 percent of total assets for industrial enterprises above scale.

the EU to establish an EU-level investment screening system resembling the US' famous CFIUS has been vetted by some EU members so that its final version is really very limited in scope and hardly a threat to China. China has also created a platform with Eastern European and Balkan countries, the so-called 16 + 1, since all of these countries are part of China's Belt and Road Initiative (BRI). Many of these countries expect investment from China to ease their financial concerns and reduce their dependence on Brussels. This, in itself, poses problems for the EU and might actually push it even closer to the United States regardless of the costs.

### Strengthening Cooperation with China

Strengthening cooperation with China is also a practical – albeit unlikely – choice for the EU inasmuch as its current strategic ally, the United States, is moving away from multilateralism, thereby harming EU interests. In fact, not only is China's economy already of similar size to the United States, its contribution to global growth will be much greater, as previously shown. This means that the opportunities in the medium term should be greater in China, but under one very important hypothesis: market access.

This is why most of the discussion as to whether Europe should rebalance its economic partnership toward China, at least partially, boils down to improving European companies' market access in China. Within that context, the EU started negotiating a bilateral investment agreement (BIT) with China at a time when the economic relations still have a positive perception from the European side, but things have changed quite dramatically since then. In fact, the 12th round of BIT negotiations has not seen an agreement. The key stumbling block is indeed market access for European companies in China and reciprocity, which of course is related to the perceived lack of market access.

Beyond market access, EU authorities are concerned about potential discrimination against EU investors operating in China, including explicit or implicit preferential subsidies for certain enterprises. Such discrimination may also be a factor for Chinese companies operating in Europe. While market access is a more general issue, potential discrimination by means of implicit or explicit subsidies has linkages to the role played by Chinese SOEs. This is true not only for the Chinese economy, but also for Chinese investment in

Europe because a good part of it (most of it until very recently) originates from SOEs.

In China, SOEs have a much broader scope, as they originate from the planned economy era when they dominated all sectors (either SOEs or collectively owned companies). Most Chinese SOEs, even now, are not established with a view to correcting market failure, but more to carry out government objectives. Chinese SOEs are bigger, more pervasive, and more dominant than their EU counterparts, and more importantly, they exist in nearly every key sector in Chinese society (Table 2). Against this backdrop, the Chinese government has created a special favorable environment for the SOEs. This actually triggered the concerns over their unfair competition in the international market and is one of the key barriers confronting China in forming an economic alliance with the EU.

The hope of an EU-China BIT is that it would foster investment on both sides, but the reality is that, at this current juncture, Chinese investment in the EU is ballooning while EU investment in China is slowing down and is already below that of China in the EU. More specifically, in 2011, China's outward FDI (including that from Hong Kong) accounted for only 1% of the EU's total inward FDI, whereas China received 3.5% of the EU's outward FDI. Given how large the Chinese economy already was in relation to the world economy in 2011, this can be considered relatively modest. The situation today is very different. Figure 6 shows that EU has seen the largest growth in attracting Chinese investment since 2016, particularly in the industrial and ICT sectors, where China has been eager to cooperate to climb up the technology ladder (Figure 7). Because the United States has closed its doors to China on the basis of 'national security concerns', the EU is now the only place where China can easily gain access to buy foreign companies.

All in all, given the increasingly difficult relations with the United States, the EU should explore a certain degree of rebalancing toward China. However, the key stumbling block will continue to be China's

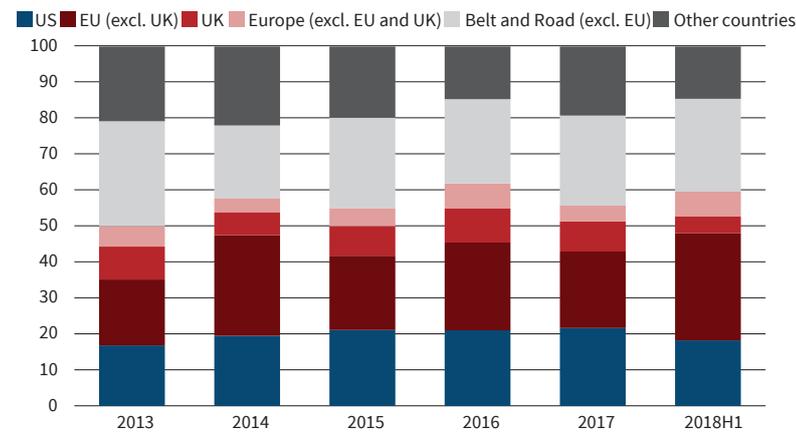
Table 2  
Sectoral sales distribution of SOEs, POEs and FOEs in China in 2008 (%)

Sector	SOE	POE	FOE
Health	58.92	41.06	0.02
Wholesale & retail	2.20	97.73	0.08
Construction	24.43	75.26	0.30
Culture	54.71	44.36	0.94
Education	34.06	64.85	1.09
Finance	21.74	76.78	1.48
Accommodation	25.96	71.60	2.44
Real estate	7.32	90.11	2.57
Environment	43.65	53.51	2.83
Research	33.94	62.28	3.78
Lease business	26.94	64.65	8.41
Restaurant	4.00	86.96	9.04
Manufacturing	15.11	75.26	9.63

Note: FOE = foreign-owned enterprise.

Source: Bruegel, based on China's economic census data.

**Figure 6**  
**Destination of the overseas completed M&A**  
 Percentage of number of deals



Source: Mergermarket; AEI; NATIXIS.

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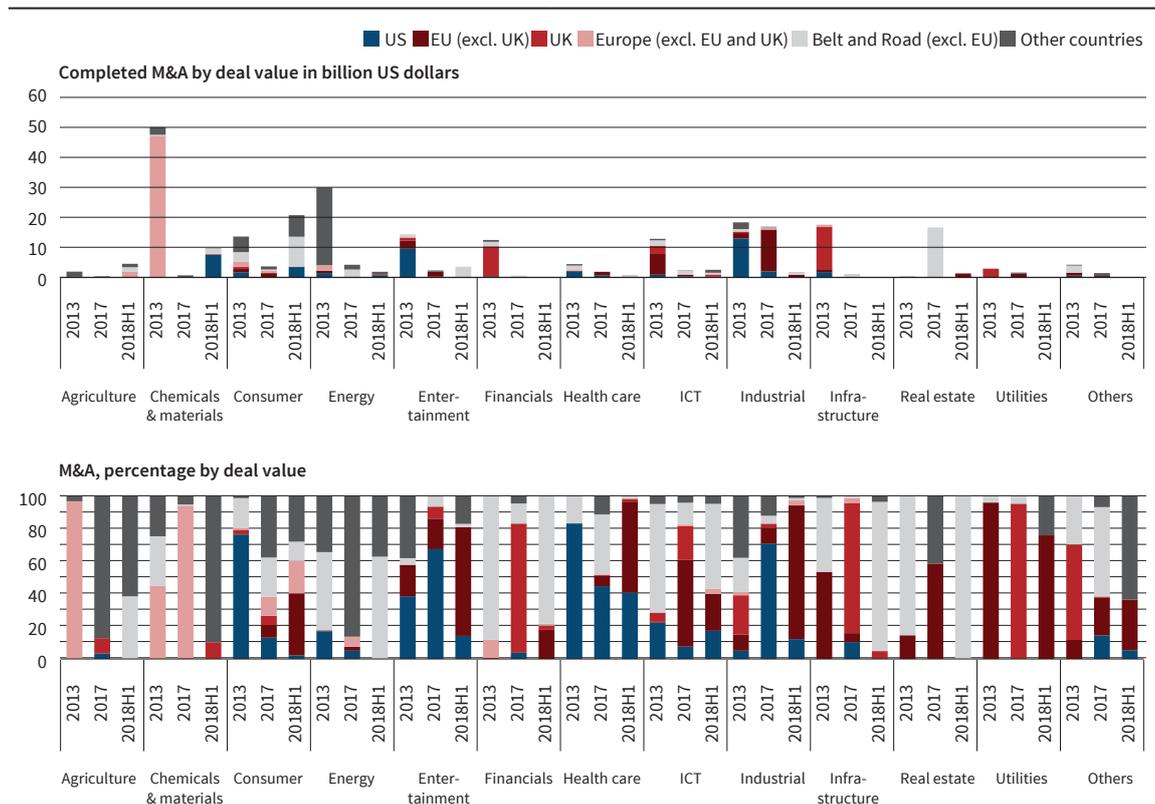
state capitalism and the lack of market access to foreign companies. For the specific case of state ownership, preferential market access in China, rather than ownership of SOEs, should be the key consideration for European policy makers when evaluating the undue advantage enjoyed by Chinese corporations. This is because private companies with ties to the Chinese government might also benefit from preferential market access. The recent case of Huawei shows how much the Chinese leadership may fall in behind key private

companies, especially if they belong to strategic sectors. While engaging with China in its liberalization and opening up, the EU cannot remain fully open to China's acquisitions of technology and the competition of Chinese state-supported companies in the single market. Europe has just announced a stricter framework for screening foreign investment (mainly directed at Chinese companies). Still, three key instruments might be used, with some reinterpretation of the EU Treaty, namely competition, dispute resolution, and state aid policy. The first does not require explanation, nor does state aid policy, with

companies, especially if they belong to strategic sectors.

More generally, the first priority issue that an EU-China BIT should pursue is market liberalization, so that any market access granted through the BIT puts European companies on an equal footing with their Chinese competitors (even with SOEs). This obviously requires reciprocity (García Herrero and Xu 2017). In fact, market liberalization is important not only for foreign companies but also for private Chinese companies so that gains are also shared with China.

**Figure 7**  
**Regional and sectoral distribution of China's overseas completed M&A**



Source: Mergermarket; AEI; NATIXIS.

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the caveat that it cannot yet be applied to non-member states. As for dispute resolution, identifying unfair behavior by a firm can be easier after a firm reveals its status by operating in the EU market. An appropriate dispute settlement mechanism can protect both European and Chinese corporations. Among the various options, an investor-state dispute settlement system (ISDS) seems to be favored internationally, but would need to be revised so that governments (either in China or the EU) do not fall prey to corporations suing them without clear justification. Furthermore, in the case of China, the very close links between corporations and the Chinese government (especially when operating abroad) could make ISDS a double-edged sword for the EU. In certain cases, China could, for its own purposes, support its enterprises in suing EU companies. In addition, the implementation of the ISDS might be difficult in China, where experience with investor-state arbitration is rather limited and there is a very low probability that the Chinese government would enforce foreign court decisions. A revision of the ISDS is thus warranted to balance the interests of the parties in the BIT negotiation.

As such, we could see that internal Chinese reform is key for the EU to pursue a better alliance relationship with China. The priority issue that the EU and China need to pursue is market liberalization, so that any market access granted through the BIT puts European companies on an equal footing with their Chinese competitors (even with SOEs). This obviously requires reciprocity. But there is still a long way to go in this direction.

## CONCLUSIONS

This paper reviews the impact of the US-led trade war against China and its immediate consequences, not only for China and the United States, but especially for the European Union. The first thing to note is that, although protectionism can never be growth enhancing, and certainly not for a net exporter like the EU, there are still gains to be made by European companies from the ongoing US-China trade confrontation, as they may be able to replace US exporters to China or, to a lesser extent according to the findings in this article, Chinese exporters to the US. Unfortunately, the current truce agreed between the United States and Chinese governments on the sidelines of the G20 meeting might reduce such opportunities for EU exporters and might even create another trade diversion from European products in favor of American products.

The fact that the EU feels increasingly squeezed between the United States and China in their strategic competition should push us to consider our options in the current global setup. So far, the EU's option seems to have been to support multilateralism at any cost. Unfortunately, the latter is increasingly less likely, as the United States has no intention

of reverting to the model it once helped create. On that basis, and given Europe's reluctance to play a leading role without the United States, the push for a return to multilateralism seems more an option of the past than an option of the future, let alone the present. The second most obvious option for the EU would be to increase its dependence on the United States, or in other words, to push its strategic alliance further. However, we should realize that this comes at a cost, or more specifically two, that were not present before. The first is the increasing unreliability of the United States as an ally and a seemingly different distribution of costs and benefits for its allies (more costs for the EU, such as military expense, but fewer benefits on the trade side). The second caveat of a greater reliance on the United States is the need to align against China on issues of interest to the United States. Although such issues are not very different from the complaints raised by the EU regarding China (market access, reciprocity, excessive role of the state in the economy, and a stronger defense of intellectual property rights), the reality is that the United States' interests will come first in this battle. In other words, the EU could lose its potential preferential access to China through a stronger alliance with the United States. Finally, the third option, namely rebalancing toward China, at least partially, cannot be an option for Europe in the current circumstances due to very limited access to the Chinese market. However, if China were to truly further open up its economy to foreign competition (i.e. offer full market access), this option could become much more favorable. Based on past experience since China entered the WTO, this option seems highly unlikely, but worth pursuing. In that context, China's willingness to open up its markets to foreign competition clearly requires market access and reciprocity. While China makes up its mind on whether the above is a real option, the EU has no choice but to protect its strategic sectors from China's acquisitions and to safeguard the single market against unfair competition from Chinese SOEs.

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Daniel Gros

## This is not a trade war, it is a struggle for technological and geo-strategic dominance

### IS THERE A CASUS BELLI FOR A TRADE WAR?

In many advanced countries, the attitude towards US trade measures against China seems to be: Trump is wrong in using blunt tools, but he is right in pointing to a real problem. But what exactly is the problem? Is there a *casus belli*?

US complaints are often based on the large US external deficit. Economists like to point out that trade balances have little to do with trade policy because a current account deficit is just the mirror image of an excess of domestic investment over domestic savings. As long as trade measures do not have an impact on savings or investment, they will not affect the current account balance. But even abstracting from these considerations, it is difficult to find a rationale for a US-China trade war given that the current account surplus of China has disappeared, as shown in the last column of the Table 1.

Trump himself often motivated his actions with trade (instead of current account) balances. Looking at trade imbalances yields a somewhat different picture than current accounts, especially if one focuses on trade in goods, which seems to be the metric preferred by the US president himself. For example, on goods (first two columns in Table 1) one finds that the US deficit is very large, at USD 750 billion (4% of US GDP), while both the euro area and China have very large surpluses, worth more than 4% of GDP (whereas Japan does not figure anymore). This implies that even viewed from this angle, there is no reason for the United States to focus on China.

Trade in services (columns 3 and 4 in Table 1) shows the relative strength of the United States in this sector. The United States has a surplus of USD 250 billion, while China is running a deficit on services (mainly tourism) of the same magnitude. However, the United States receives only a part of

Chinese tourism, which leaves the bilateral balance on goods and services deeply negative. Economists tend to focus on the current account (last columns in Table 1), which besides goods and services also includes capital income. On this measure, China is no longer a part of the problem, as its current account surplus has essentially disappeared. Global imbalances have become a transatlantic issue, as the deficit of the United States is mirrored in a surplus of the same size for the euro area.

In terms of trade ‘imbalances’ it is thus difficult to find a *casus belli* against China unless one focuses on bilateral balances in goods. But in this case the transatlantic dimension is equally important.

### DOES CHINA PROTECT AGAINST IMPORTS?

One argument for the United States to focus on China could be that the euro area is running a large trade surplus, but at least has open markets; whereas the trade surplus of China could be due to protectionism. But even this argument does not stand up to scrutiny. The standard tool of protectionism is tariffs. On this front, the problem seems very limited. The average tariff rate applied by China has continue to fall even after its entry into the WTO in 2001, which had already forced the country to reduce tariff protection by one half. Indeed, the average applied tariff now seems to have fallen to less than 4%, and there are few complaints about tariffs even though China maintains an unusually high number of tariff peaks, i.e. high tariffs for very limited product categories. A CEPS study finds that China’s tariff schedule contains an unusually high number of tariff peaks. But these high tariffs affect only products of limited relevance. Moreover, tariff peaks are not even on the list of complaint of either the United States or the EU.

Tariffs were in any case yesterday’s problem (until Trump dusted them off as a weapon for his trade war). But they provide one clear numerical indicator of obstacles that traders (in goods) might encounter at the border. There are many other ways to create obstacles to trade. It is difficult to measure the overall importance of these ‘non-tariff’ barriers to trade because they can consist of so many different measures, including licensing, conformity assessment, etc. These non-tariff measures are difficult to keep



Daniel Gros  
Center for European  
Policy Studies

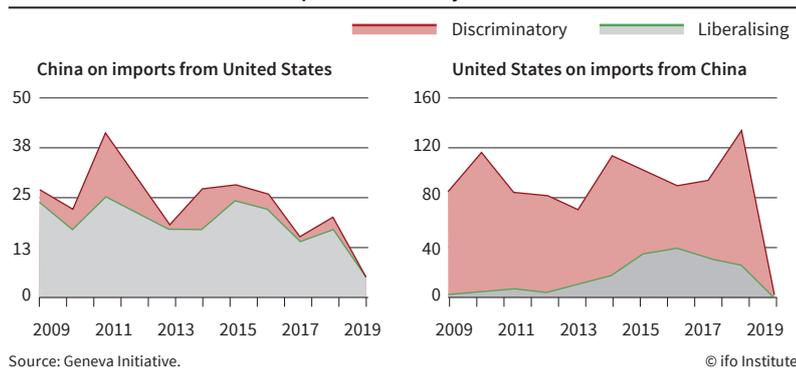
Table 1

#### Trade and current account imbalances

	Net balances 2016				Current account 2018
	Goods		Services		
	USD billion	% GDP	USD billion	% GDP	% GDP
US	- 753	- 4.0	248	1.3	- 2.5
China	494	4.4	- 244	- 2.2	0.3
Euro area	487	4.1	65	0.5	3.5
Japan	51	1.0	- 11	- 0.2	3.7

Source: World Bank.

Figure 1  
Number of new interventions implemented each year: US and China



track of because they usually concern only a specific sector or product.

However, the website of the Global Trade Alert Observatory has since 2008 provided an excellent running observatory of new measures (called state interventions) introduced by major trading nations. For China, this independent body finds only around 25 new measures that might restrict trade with the United States (annual average since 2008). Interestingly, China also enacted about the same number of new measures that have the effect of liberalizing trade with the United States. China has thus not become more protectionist against the United States.

The other way around the situation looks very different: the United States has enacted between 80 and 100, or about 4 times more, restrictive measures against China, which far outstrip the much less numerous liberalizing measures. Moreover, as illustrated in the Appendix, one finds a similar asymmetry between Germany and China: in recent years, China has introduced about as many liberalizing as protectionist measures. But Germany has taken mostly protectionist measures *vis-à-vis* China.

This means that in terms of trade measures, China is being more sinned against than it is sinning itself. One could of course argue that protection against Chinese exports is needed because exporters there receive subsidies. This is one point on which the complaints seem justified. When China joined the WTO, it took on the obligation of notifying the phase-out of a number of existing subsidies and notifying all those that continue (Annex 5a and 5b to the Accession Protocol). However, this 'soft' commitment was not honored. In late 2018, China suddenly sent a notification to the WTO for all the missing prior years. However, it seems that these notifications were incomplete, as found in the latest WTO Trade Policy Review. In principle, the United States and Europe could offset the advantages that these more or less hidden subsidies give Chinese exporters by introducing countervailing duties. In practice, this is difficult because the opaque nature

of the subsidies makes it difficult to prove their impact in specific cases.

## STATE-OWNED ENTERPRISES

The case for countervailing action would be justified in particular in the case of exports by state-owned enterprises (SOEs). This might have been a problem in the past, when SOEs accounted for one half of exports. But now their share of overall Chinese

exports has fallen to less than 10%.<sup>1</sup> Despite their now very limited importance for trade, SOEs constitute another bone of contention between China and the 'West'. This has of course little to do with 'trade' policy, since SOEs are just one element of the economic order in China. As mentioned, SOEs do not play a large part in Chinese exports and if they practice unfair pricing the problem can be dealt with by traditional countervailing duties and other measures.

The real complaints about SOEs relate to the structure of the Chinese economy. Complaints from the European Chamber of Commerce in China concern the preferential treatment given to SOEs mostly in non-tradable sectors like financial services, etc. Of course, the dominance of huge state-owned banks creates the temptation to favor SOEs in the allocation of credit. But a lack of access to cheap credit should not be a problem for foreign-owned or -invested companies, which usually have a major multinational enterprise with access to global capital markets behind them. Private Chinese enterprises ought to be equally, or perhaps even more, disadvantaged by SOEs having preferential access to capital.

The role of SOEs in the Chinese economy is difficult to document in detail, but most statistics suggest it remains important, albeit having fallen somewhat over the last two decades. For example, SOEs still account for about half of the capital stock of industrial enterprises (down from three quarters). Moreover, SOEs tend to be large. A number of them, especially the large state-owned banks, now rank among the largest global companies.

But these examples are not representative of the entire sector. SOEs remain an important factor in the Chinese economy, but their importance has declined considerably over the last decade and more recently. For example, SOEs now account for only about one quarter of (urban) employment and a similar share of profits (and only one tenth of exports,

<sup>1</sup> There is one exception that proves this rule. The Chinese Railway Corporation, which is of course vastly larger than any other railway company in the world, has spent heavily on R&D, allowing it to become an important exporter of trains and material. China alone now accounts for one half of all global trade in this sector. But this sector is not typical of overall Chinese trade patterns.

as mentioned above). Foreign-controlled enterprises make more profits (31% of the total), while the share of profits going to private Chinese enterprises is even higher.

Chinese statistics show that foreign-invested enterprises generally achieve much higher profitability than state-owned ones and that the profitability of foreign-invested enterprises has persisted, not fallen, over time, although it remains slightly lower than that of private Chinese ones. There is thus evidence that while SOEs are not efficient in their investment, they play only a small role in exports and their continuing role has not impeded continuing high profitability of foreign investment in China. Some observers have detected a revival of the role of SOEs more recently, but the evidence for this is still tentative.<sup>2</sup>

### THE REAL PROBLEM IS FDI

The finding that there is no *casus belli* for a classic trade war is confirmed, if one looks carefully at the complaints enumerated by the United States or at the detailed report published by the European Chamber of Commerce in China summarizing the complaints from its over 1,600 member companies. This report makes interesting reading because one does not find many complaints about ‘trading’ practices, at least in the narrow sense. The main complaint of EU enterprises in China is the perception of unfair treatment by the Chinese authorities. The main complaint of the US government is that US high-tech firms are forced to reveal their technology and trade secrets. An additional, common complaint is that in many sectors foreign firms are not permitted to hold a majority stake in joint ventures. The core of all these complaints is thus not trade, but FDI and the situation ‘behind the border’, in the Chinese market.

Measuring barriers to FDI is as difficult as measuring non-tariff barriers to trade. Barriers to cross-border investment can take many forms, such as limits on foreign ownership in certain sectors, different fiscal treatment for foreign-owned enterprises, or outright bureaucratic discrimination. The OECD publishes a composite indicator of restrictiveness towards FDI. For China, this indicator shows that overall, the country is far less open than OECD countries, but that there has been continuous, albeit slow improvement.

A further subtle distinction one needs to make is that between barriers to new inflows of direct investment (i.e. investment with the implication that the foreign investor obtains control over the investment) and the treatment of enterprises that are under foreign control. In most OECD countries, a company incorporated in a different home country is treated in

the same way as any other domestically incorporated company (this is called ‘national treatment’). But in China, there is a special regime for ‘foreign-invested enterprises’. In the past, the purpose of this special regime might have been to protect foreign investors from an overbearing domestic bureaucracy. But today, there is a widespread perception that ‘foreign-invested enterprises’ are not treated fairly.

The complaints have come in the light of the rapidly changing context in China itself. The real change might simply be that in the past the formal handicaps that foreign-owned enterprises faced were compensated by the eagerness of the provincial authorities to attract foreign investment. As long as provincial leaders were also judged on the amount of FDI they attracted, they would provide many incentives to outweigh the formal restrictions on FIEs. Today, there is less emphasis on growth in the evaluation criteria of provincial leaders, which means local authorities have less reason to provide incentives for FDI.

Moreover, the technology gap between Chinese and foreign enterprises is shrinking rapidly in many sectors. Restrictions on majority foreign ownership mattered little in the past when the formally majority Chinese partner (often owning 51 percent) had an incentive to acquiesce to the *de facto* control of a foreign investor who had superior technology or market access abroad. With technology on a more level playing field, it is the uneven playing field as to restrictions on foreign majority ownership that starts to matter. This is also the reason why it is more appropriate to speak about a ‘technology war’ than a ‘trade war’.

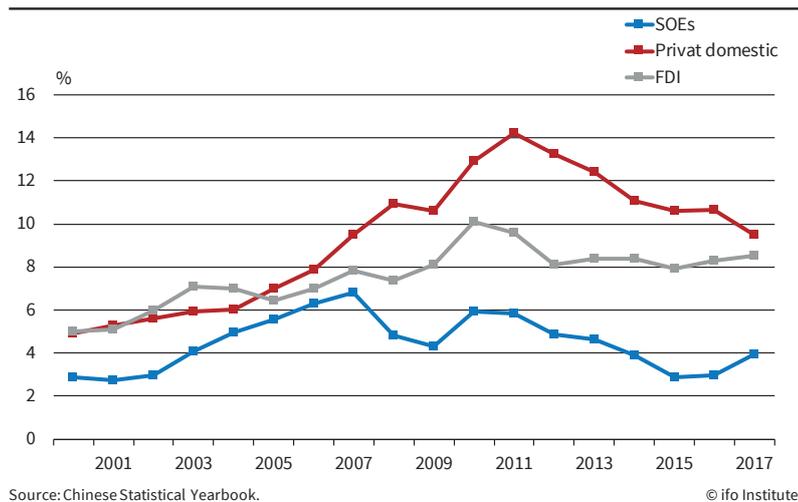
### ‘FORCED TRANSFER OF TECHNOLOGY’: A CASUS BELLI?

Exhibit one in the complaints about Chinese unfair practices is what the US authorities call ‘forced transfer of technology’. The term ‘forced’ suggests a degree of coercion that does not make economic sense. A US company can always choose not to invest in China. If a US or European company chooses to invest in China despite the requirement to transfer technology, it does because it expects to make a profit. That profit might be smaller than it would have been with no technology transfer requirement, but the choice of going into China anyway reveals that the company sees more opportunities than risks.

Moreover, the Chinese partners (for example, in a joint venture) know that the foreign investment will come with a technology transfer. This means that the local partners will be ready to accept that the valuation of the foreign investor’s contribution to a joint venture includes the value of the transfer of technology. For example, the local partner or the local government can provide cheap land, infrastructure, tax exemptions, or loans on favorable terms. In other

<sup>2</sup> The data for 2017 shows an unusual jump in the profits of SOEs (while those of private Chinese enterprises fell). It is too early to tell whether this is the result of a re-classification or other statistical adjustments.

Figure 2  
Profit rates in China



words, the transfer of technology, because it is the rule, will be priced into any FDI deal. The continuing high profitability of foreign-invested enterprises suggests that this has indeed been the case.

It is only natural that American and European companies will assert in surveys that they would be better off if they had not been ‘forced’ to transfer technology. However, these statements do not take into account the fact that the terms on which the initial investment was made probably contained advantages that were available to the Western investors only because of the expectation of technology transfer. It is of course likely that in many cases the most efficient investment deal would not have involved a wholesale transfer of technology, but perhaps only a licensing agreement or the payment of royalties. However, that should be only a secondary consideration, since the present value of the foregone licensing fees or royalties would have figured implicitly in any investment deal.

It is often impossible to prove the pressure exerted by Chinese authorities to transfer technology, because China made a formal undertaking when it entered the WTO that it would no longer require technology transfers.<sup>3</sup> However, because of this WTO undertaking it seems that the pressure to make technology transfers has become informal. According to many observers, the Chinese authorities even avoid

<sup>3</sup> See the Chinese WTO Agreement. Also, in Annex 1 of the Protocol, China pledged to abolish technology transfer requirements in order to comply with the WTO Trade-related Investment Measures (TRIMS)—but that is only with regard to trade in goods.

e-mails that could be used as proof, instead giving only indirect oral ‘hints’. It is thus likely that in reality this pressure to transfer technology does persist.

**HAS FORCED TECHNOLOGY TRANSFER AFFECTED PROFITS?**

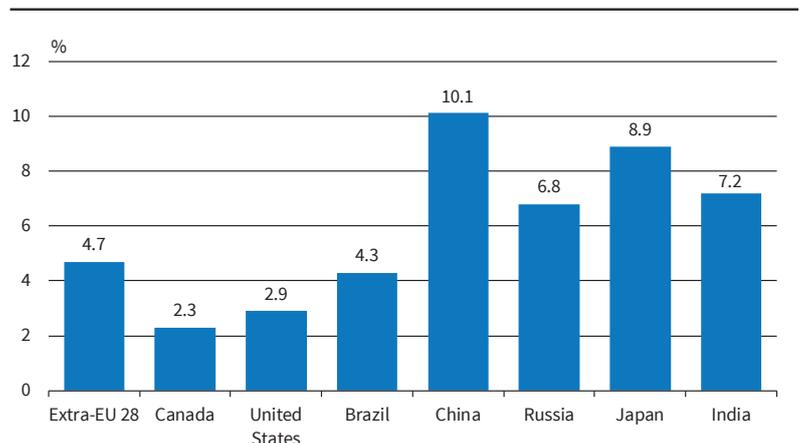
However, as argued above, FDI inflows should continue only if it remains in the interest of foreign enterprises to invest in China, knowing in advance that the pressure to transfer technology will exit, but might be offset by other advantages.

The confirmation of this reason can be found in the rates of return on FDI in China: these have remained high, as can be seen from different angles. Chinese statistics themselves report the rate of return on foreign-invested, state-owned, and private domestic enterprises.

Figure 2 shows the profit rates of these three groups since China joined the WTO. The rate of return on FDI (as measured by Chinese statistics) has in fact tended to increase slightly over time. It reached a natural peak during the Chinese boom of 2010, but at around 8% it remains much higher than that of SOEs (around 3%). The profitability of private Chinese enterprises is somewhat higher than that of foreign ones, but the difference has narrowed recently to about 2 percentage points.

Another indicator is the profitability as seen from the home country. Figure 3 shows the profitability of FDI for the EU. The average rate of return on outgoing FDI is somewhat below 5%: under 3% for EU investment in Canada and the United States, but 10% for

Figure 3  
Average rate of return on FDI 2014–2017



investment in China. China seems to offer by far the highest rate of return among all the major destinations for EU direct investment abroad.

The problem with the FDI statistics is that almost none of the FDI from OECD countries to China goes directly into that country. In both the US and the EU statistics, the share of foreign direct investment going to China is less than 4% (less than for Brazil, for example). This is why one has to take the balance-of-payments FDI data with a big grain of salt.<sup>4</sup>

All these considerations suggest that the cost of ‘forced transfer of technology’ for US and other Western high-tech companies might be vastly exaggerated. But the argument also applies the other way around. Why should China continue to insist on this policy of linking market access for foreign investors to a transfer of technology? The key official argument on the Chinese side is that in a developing country the local companies are in a weak position *vis-à-vis* foreign investors whose technology they might not fully understand. This argument is also used in many less developed countries, whose FDI regimes are often as restrictive as that of China.

However, the argument that China is a developing economy that deserves special exemptions from WTO rules becomes less and less tenable as the country develops its own technological expertise. China’s indigenous capacities for research and development have literally exploded over the past few decades. Spending on R&D is now larger as a percentage of GDP, and larger in absolute terms than in Europe and many other OECD countries. Today, there is thus little need to protect Chinese ‘infant’ industries.

Rapidly advancing domestic know-how and the absorption of technology also explain why Western complaints have become more vocal. Many Western firms probably agreed to a transfer of technology under the assumption that Chinese competitors would anyway not be able to adapt and master it. Part of today’s complaints stem from the fact that this expectation of superiority has been confounded. China produces more bachelor graduates in science and engineering than the United States and Europe combined.

One reason why the Chinese authorities remain so reluctant to give up on their technology transfer policy is that they are making a mirror-image mistake to the United States: they overestimate the impact of informal state intervention to ‘foster’ the transfer of technology. They fail to see that Western companies will take this policy into account when deciding on investments in China, offering worse terms than if they were able to keep their technology and use licensing agreements instead. Moreover, these other forms of technology transfer are becoming more and more widespread, with the result that recorded royalty

payments from China have grown very quickly and now amount to close to USD 30 billion per annum—putting China second only to the United States in the league table of paying for foreign technology. This shows that a large and increasing share of technology transfer has not been ‘forced’. Very recently (late December 2018), the government of China announced that it would abolish those administrative measures that result in de facto ‘forced technology transfer’. It remains to be seen whether this new policy will actually be implemented across the many different layers of government involved (central, provincial, and local governments, many different ministries, etc.).

## CONCLUSION

An outright trade war between the United States and China (in the sense of both sides imposing stiff tariffs on each other’s imports) remains unlikely. However, tensions between the two countries are likely to persist. President Trump’s tough stance on China remains popular in the United States, not so much due to the bilateral trade deficit or frustration about lost business opportunities, but because of the concern that China is about to outcompete the United States for technological leadership in a number of sectors considered critical for national security (on both sides of the Pacific). The reason Sino-US tensions on FDI and the associated ‘forced transfer of technology’ are so intense is because they are mostly about income distribution between two monopolists. The Chinese authorities hold the key to access to a vast, and quickly growing, market whereas Western companies still have a monopoly on the best technology in many sectors.

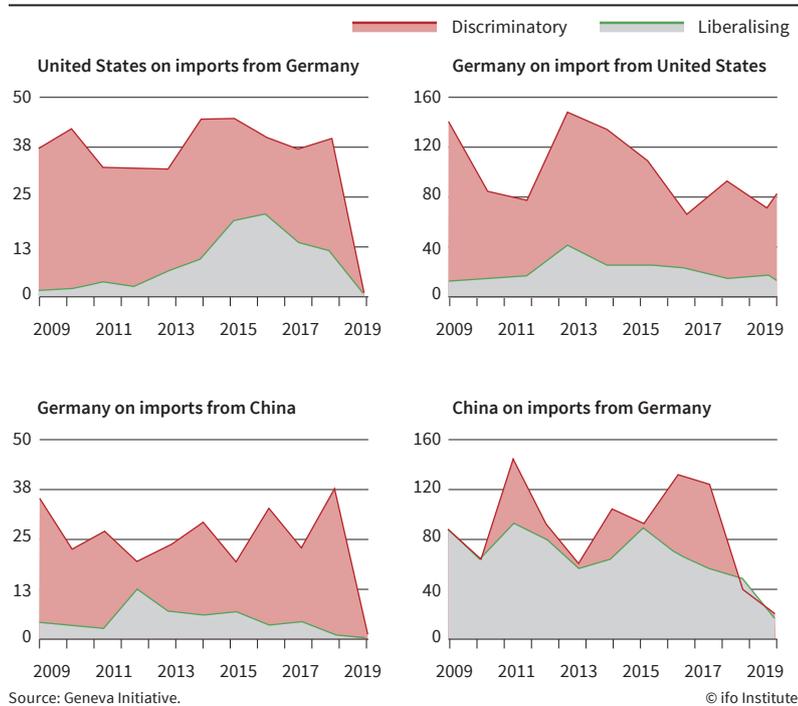
The United States and China account for a large share of global trade, but they alone do not dominate the global economy. In the coming ‘cold economic war’, the side that can obtain the support of neutral powers will have a strong advantage. Other large trading powers—Europe and Japan, for example—do not share the US desire to keep China down and are thus unlikely to back unreasonable trade measures. However, Europe and Japan share the narrower US concerns about an uneven playing field generated by persistent Chinese state intervention in the economy. It is up to the Chinese authorities to allay legitimate concerns about these issues, which go to the heart of a global rules-based trading system. The Chinese economy is now so strong that restrictions on foreign ownership and any form of forced transfer of technology are no longer needed.

<sup>4</sup> Data on greenfield (projects) assembled by UNCTAD shows a very different picture regarding the distribution of FDI, but this source has no information on the profitability of these projects.

**APPENDIX**  
**MARKET DISTORTING MEASURES: GERMANY VS.**  
**US AND GERMANY VS. CHINA**

Across the Atlantic one finds a rough equivalence of measures, if one takes Germany to represent Europe. The absolute number of measures is somewhat greater for the United States (about twice as many, see the difference in scale in Figure A1). But this is understandable given the countries' relative difference in size. However, if one looks at Germany *vis-à-vis* China, one finds a similar asymmetry to that between China and the United States: for China, the number of liberalizing measures roughly equals the number of protectionist ones. But Germany's measures affecting China are more commonly of the protectionist kind.

Figure A1  
**Number of new interventions implemented each year: US and China**



Source: Geneva Initiative.

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Gabriel Felbermayr and  
Marina Steininger

## Trump's trade attack on China – who will have the last laugh?

The dispute regarding trade issues between China and the United States dates back to a time before Trump had likely even thought about becoming the next president of the United States. Under US President Barack Obama, China was challenged 16 times, on issues regarding harmful dumping of products onto the US market, export restrictions on rare earths, overcapacities in the solar panel and steel industries, and illegal taxes on American steel and cars. But the approach to solving these issues was quite different from the most recent trade dispute. Barack Obama supported a multilateral trade agreement, including rules on state-owned enterprises, currency manipulation issues, and new guidelines on environmental and labor standards.<sup>1</sup>

Trump's strategy clearly deviates from his predecessor's. It began in late 2017, when the US trade commission publicly expressed its concerns that imports of washing machines and solar panels from China are damaging US industries. The Sino-American trade dispute then escalated quickly in 2018. China and the United States found themselves in a spiral of never-ending tariff threats. A first constructive breakthrough was reached when both presidents declared a 90-day 'cease-fire' on December 1. Until March 1, the United States would not impose higher tariffs on Chinese imports valued at USD 200 billion. But despite these first signs of a more constructive Sino-American dialogue, the ongoing trade dispute remains largely unresolved. The United States and China still have major differences to overcome.

After three days of negotiations in Beijing, China's trade ministry stated that the talks increased mutual understanding and created a basis for addressing the concerns of both sides. The Office of the United States Trade Representative substantiated the need for an agreement that satisfies both economies. Sino-American trade relations should be fair, reciprocal, and balanced to reach a long-term equilibrium on such issues as forced technology transfer, protection

of intellectual property, non-tariff barriers, cyberattacks, and cyber theft of trade secrets. According to a statement by the US trade representative, China supposedly pledges to buy 'significant quantities' of products from US agriculture, manufacturing, and the energy sector, and to allow more services trade. Progress has also been made on such topics as additional imports and the opening of China's market to US capital. The Wall Street Journal states that the negotiations on additional imports and the opening of the Chinese market to US capital have made progress, but differences over more complicated issues, such as protection of intellectual property and subsidies to Chinese state-owned enterprises, remained unresolved. China's Ministry of Commerce (MOC) reported that consultations on structural trade issues moved forward. The MOC's spokesperson, Gao Feng, stated that the exchange of views was "broad, deep, and meticulous". China will, for instance, open its market to five additional genetically modified grains, which the US has been demanding for several years.

This article offers a quantitative analysis of the potential effects of the US-China trade dispute. China and the United States are currently in the process of negotiating an exit from the escalation spiral set in motion last year. We quantify the consequences of different trade dispute measures for the United States, China, the EU28, and the rest of the world. How will this play out in the modern world of fragmented global value chains, and what are the stakes? Does this conflict matter for outsiders? How much of the global downturn in economic activity can be plausibly explained by the trade conflict? This report sheds light on these questions.

### QUANTIFICATION OF THE TRADE DISPUTE

The analysis is based on Aichele *et al.* (2014) and Aichele *et al.* (2016) and simulates two sets of counterfactual scenarios: the first set of scenarios quantifies the effects of tariff measures that the United States and China have already imposed. The second set quantifies the consequences of further potential trade escalations. The first four scenarios (S1a to S4a) include different stages of unilateral US tariff increases on Chinese products. The remaining four scenarios (S1b to S4b) additionally model different retaliation measures of China on US products. Scenario 2b replicates the current trade dispute. The simulation analysis provides us with general equilibrium-consistent effects on real income (i.e. GDP), bilateral trade, and sectoral value-added for the United States, China and the EU28. The quantitative framework accounts for national and international production networks by incorporating a global input-output table. The analysis covers more than 90 percent of global value-added and trade. The main channels of the protectionist



Gabriel Felbermayr  
Kiel Institute for the  
World Economy



Marina Steininger  
ifo Institute

<sup>1</sup> The multilateral agreement, called the Trans-Pacific Partnership Agreement, initially excluded China, but it was hoped that China would eventually join.

measures and their potential global impact can be analyzed.

We study the following scenarios based on unilateral actions by the US in goods trade:

- Scenario 1a: 25% tariff on 10% of US imports from China, worth approximately USD 50 billion (in place as of February 2019).
- Scenario 2a: as scenario 1a, plus a 10% tariff on 40% of US imports from China, worth approximately USD 200 billion (in place as of February 2019).
- Scenario 3a: 25% tariff on 50% of US imports from China, worth approximately USD 260 billion (threatened by the United States).
- Scenario 4a: 25% tariff on 100% of US imports from China, worth USD 520 billion (threatened by the United States).

We complement this analysis with scenarios that allow for Chinese countermeasures:

- Scenario 1b: as scenario 1a, plus a 25% tariff on 40% of Chinese imports from the United States, worth approximately USD 50 billion (in place as of February 2019).
- Scenario 2b: as scenario 2a, plus a 25% tariff on 40% of Chinese imports from the United States, worth approximately USD 50 billion; additional 10% tariff on 50% of Chinese imports from the United States, worth USD 60 billion (in place as of February 2019).
- Scenario 3b: as scenario 3a, plus a 25% tariff on 90% of Chinese imports from the United States, worth approximately USD 100 billion (threatened).
- Scenario 4b: 25% tariff on 100% of US imports from China, worth USD 520 billion; 25% tariff on 100% of Chinese imports from the United States, worth USD 120 billion (threatened).

## ECONOMIC COSTS

Table 1 shows the change in real income (i.e. GDP) for the United States, China, the EU28, and the rest of the world. This number reflects both factor income (such as wage income) and government tariff income.

Table 1

### Changes in real income

	EUR million							
	S1a	S2a	S3a	S4a	S1b	S2b	S3b	S4b
Germany	- 22	43	102	191	132	264	428	495
France	- 3	74	103	217	9	14	123	193
Italy	93	108	215	352	103	46	239	347
Rest of EU	27	36	115	179	- 12	21	74	149
EU28	95	260	534	939	233	345	864	1184
US	1697	3468	2864	- 2236	- 2911	- 2585	- 4032	- 9458
China	- 5197	- 9298	- 21282	- 33749	- 1920	- 5698	- 17789	- 30350
RoW	509	854	3083	5293	1097	1428	2481	5409

Source: ifo simulations. Scenario S2b models the *status quo* of the current trade conflict. The aggregate Rest of EU excludes Germany, Italy, and France. The detailed results for all EU28 countries can be found in the Appendix.

Scenarios 1a to 4a show that, under the assumption that China does not retaliate, the United States can hope for an increase in GDP if it does not overplay its hand. The point is that unilateral US tariffs will lead to an improvement of US terms of trade, which benefits producers (but damages consumers and other users of imports) and raises US government income. Higher tariffs reduce the purchasing power of households, which decreases domestic consumption. At the same time, however, higher import costs can lead to consumers replacing imported products with domestic products, which then increases domestic sales and decreases imports, which is the case in these scenarios (see Table 3). That gain amounts to EUR 3.5 billion in S2a, which corresponds to the current *status quo* without Chinese retaliation, but it turns negative when the United States imposes high tariffs on all imports from China (scenario S4a). China, in contrast, loses EUR 9.3 billion in GDP under scenario S2a—a loss that would rise to a whopping EUR 34 billion if the United States imposes a 25% tariff on all goods imported from China.

If the US overplays and imposes tariffs on intermediate goods imports, such as in scenario 4a, they would face higher domestic production costs. One consequence of this would be a loss in international competitiveness and a reduction of exports, which would intensify the negative effects on real income. This explains why the change in real income deteriorates from scenario 2a to 3a to 4a, even without retaliatory measures by China. Additional effects such as the deterioration of consumer or business confidence, for instance due to increased uncertainty, could exacerbate the negative impact but are not captured in our simulations. China's retaliatory tariffs, however, then turn the American gain into a EUR 2.6 billion loss, while China's loss narrows to EUR 5.7 billion – see scenario S2b, the representation of the current *status quo* of the US-China trade conflict. Thus, Chinese real income still shrinks about twice as much as the American figure.

The various scenarios have only a marginal impact on global economic activity. However, a trade dispute escalation could potentially have larger global effects. The EU28 can be seen as the winner of this spiral of tariff increases, even though the

Table 2  
Changes in sectoral value-added in the United States, China and the EU28

US	Percent							
	S1a	S2a	S3a	S4a	S1b	S2b	S3b	S4b
Manufacturing	0.09	0.21	0.42	0.75	-0.06	0.04	0.23	0.56
Services	-0.02	-0.03	-0.08	-0.16	-0.02	-0.04	-0.09	-0.17
Agri-food	-0.15	-0.29	-0.62	-0.95	-0.30	-0.48	-0.88	-1.22
Total	-0.01	-0.02	-0.06	-0.10	-0.04	-0.05	-0.10	-0.14
China	S1a	S2a	S3a	S4a	S1b	S2b	S3b	S4b
Manufacturing	-0.10	-0.18	-0.41	-0.64	-0.19	-0.30	-0.55	-0.78
Services	-0.02	-0.04	-0.09	-0.14	-0.05	-0.09	-0.15	-0.20
Agri-food	0.05	0.09	0.18	0.26	0.10	0.16	0.27	0.35
Total	-0.03	-0.05	-0.12	-0.19	-0.06	-0.09	-0.18	-0.25
EU28	S1a	S2a	S3a	S4a	S1b	S2b	S3b	S4b
Manufacturing	-0.01	-0.01	-0.03	-0.04	0.02	0.02	0.02	0.00
Services	0.00	0.00	0.01	0.02	0.00	0.00	0.01	0.01
Agri-food	0.00	-0.01	-0.01	-0.02	-0.01	-0.01	-0.02	-0.03
Total	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.01

Source: ifo simulations. Scenario S2b models the *status quo* of the current trade conflict. The detailed value-added effects for all EU28 member states can be found in the Appendix.

gains are very small. Germany is the main benefiter in the EU28. These effects are driven by the increase in EU28 exports to the United States and China. This analysis does not cover all relevant channels through which the trade conflict affects economic activity, but it does suggest that the trade dispute alone does not fully explain the current downturn in the global economy.

Table 2 shows the sectoral value-added changes of the United States, China, and the EU28. Both the United States and China will be confronted with a decrease in value-added in all scenarios. The negative extent increases with the number of products hit by a tariff increase (S1a to S4a). US value-added will additionally suffer from China's countervailing tariff increases (S1b to S4b). Similarly, Chinese value-added would be negatively impacted if China retaliated against the United States. The tariffs that are already in place (S2b) increase US sectoral value-added in the manufacturing industry by 0.04%, while shrinking the value-added in the agri-food sector by 0.48% and in the services sector by 0.04%. These trends increase with the extent of the retaliation scenario (S3b and S4b).

Next, one can take a closer look at the changes in the trade structure. The upper part of Table 3 shows the change in bilateral trade among the United States, China and the EU28. The lower part of the table shows the change in domestic sales of the respective countries and the EU28. The simulations suggest negative effects on US exports to China in all scenarios (between -EUR 1.4 billion and -EUR 51.0 billion). Retaliation measures by China decrease exports even further. US exports to the EU28 also shrink, but to a much lesser extent than those to China (between -EUR 0.2 billion and -EUR 11.3 billion). Chinese exports to the United States decrease with the intensity of the trade dispute. A similar picture is evident on the import side. Retaliation measures worsen this downturn. China partly compensates the decrease of exports to the United States with new trade linkages with the EU28. The United States can compensate the decrease in exports and imports with an increase in domestic sales. But substituting domestic production provides only limited compensation because the overall effects of higher tariffs imply a decrease in real income.

The bottom line: in the *status quo* situation (scenario 2b), the US trade deficit in goods with China falls

Table 3  
Changes in trade

Exports		Imports		Changes in bilateral trade, EUR billion							
				S1a	S2a	S3a	S4a	S1b	S2b	S3b	S4b
US	China	-1.4	-2.6	-5.6	-8.7	-29.0	-37.1	-47.5	-51.0		
US	EU28	-1.9	-3.4	-7.4	-11.3	0.7	-0.2	-3.4	-7.4		
China	EU28	2.3	4.1	9.5	15.4	0.1	1.4	6.0	11.6		
China	US	-25.8	-46.8	-105.6	-167.9	-30.4	-52.1	-110.7	-171.3		
EU28	China	-2.2	-4.0	-9.1	-14.2	0.4	-0.6	-4.9	-10.0		
EU28	US	4.0	7.1	16.3	26.1	0.4	2.5	10.5	19.9		
Exports		Imports		Changes in domestic sales, EUR billion							
				S1a	S2a	S3a	S4a	S1b	S2b	S3b	S4b
US				45.2	81.0	180.7	280.2	1.3	25.4	110.6	207.3
China				-52.5	-94.1	-214.2	-339.3	8.6	-16.8	-118.1	-239.0
EU28				-1.8	-3.6	-6.5	-8.8	8.8	9.7	10.0	8.1

Source: ifo simulations. Scenario S2b models the *status quo* of the current trade conflict. The results for all EU28 member states can be found in the Appendix.

by about USD 15 billion (4% of the current deficit). In a full-fledged trade war, the US trade deficit in goods with China goes down by some USD 120 billion (33% of the current deficit).

## CONCLUSION

China and the United States are currently in the process of negotiating an exit from the escalation spiral set in motion last year. If there is no agreement by March 1, the threat of an escalating trade dispute could hit China, the United States, and other regions, such as the European Union. Our quantitative analysis of the potential effects of the Sino-American trade dispute reveals a number of insights.

First, the tariffs and counter-tariffs implemented as of today cost the United States EUR 2.6 billion and China EUR 5.7 billion in GDP. Both economies lose, but China loses much more, both absolutely and relatively. Europe, in contrast, could register a GDP gain of EUR 345 million – a positive but statistically negligible number. Chinese exports to the United States go down by EUR 52.1 billion while US exports to China fall by EUR 37.1 billion, slightly improving the US trade balance.

Second, a full-blown tariff war, where both parties require an additional 25 percent tax on all imports, would lower US GDP by EUR 9.5 billion and Chinese GDP by EUR 30.4 billion. If President Trump's objective is to use trade policy to increase the economic distance between the US and China, such an escalation would help. However, as is the case with every war, such a strategy comes with high costs.

Third, a full-blown trade war would increase value-added in the US manufacturing sector by 0.6%, while the agri-food sector would shrink by 1.22%. In China, manufacturing would decline by 0.8%. Again, Trump could hail victory as the US manufacturing sector grows while China's shrinks. The bilateral trade balance between the United States and China would also improve: Chinese exports to the United States would fall by a whopping EUR 171.3 billion, while US exports to China would contract by EUR 51.0 billion.

Fourth, while Europe may benefit slightly from trade diversion effects, its trade surplus with the United States would become even larger, threatening further transatlantic conflict.

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## APPENDIX

Table A1

## Changes in real income of EU28 member states

	EUR million							
	S1a	S2a	S3a	S4a	S1b	S2b	S3b	S4b
Austria	- 0.07	0.07	0.49	0.84	0.62	0.23	0.67	1.10
Belgium	0.14	0.28	0.48	0.83	0.40	0.91	1.25	1.59
Bulgaria	0.01	0.03	0.09	0.15	- 0.03	- 0.02	0.03	0.09
Croatia	0.02	0.02	0.06	0.10	0.00	0.01	0.02	0.07
Cyprus	0.00	0.01	0.02	0.03	0.00	0.00	0.01	0.01
Czech Republic	0.34	0.25	0.82	1.62	0.53	0.48	1.08	1.78
Denmark	0.07	0.28	0.53	0.95	0.25	0.28	0.70	1.07
Estonia	0.00	0.01	0.02	0.03	0.00	0.00	0.01	0.03
Finland	0.14	0.18	0.29	0.54	0.28	0.10	0.42	0.53
France	- 3.30	74.14	102.77	217.33	9.25	13.58	122.86	192.71
Germany	- 21.74	42.67	102.10	190.67	131.59	264.35	428.02	495.47
Greece	0.31	0.51	0.86	1.36	- 0.11	0.22	0.23	0.85
Hungary	0.18	0.39	0.91	1.37	0.16	0.22	1.03	1.43
Ireland	- 0.14	- 0.42	- 1.01	- 1.35	1.05	1.18	0.95	0.46
Italy	92.57	107.63	214.60	351.80	103.49	46.38	239.35	346.92
Latvia	0.00	0.01	0.02	0.03	- 0.01	0.00	0.01	0.02
Lithuania	0.01	0.02	0.05	0.09	0.00	0.01	0.04	0.07
Luxembourg	- 0.02	- 0.04	- 0.09	- 0.13	0.02	0.01	- 0.02	- 0.06
Malta	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Netherlands	1.54	2.23	6.31	11.44	2.55	5.59	9.29	13.80
Poland	2.90	4.12	9.38	14.79	2.51	5.16	7.62	12.60
Portugal	0.24	0.19	0.48	0.85	- 0.19	0.13	0.26	0.46
Romania	0.08	0.64	1.24	1.54	0.28	0.90	0.93	1.77
Slovakia	0.01	0.01	0.05	0.09	0.05	0.06	0.15	0.18
Slovenia	0.01	0.03	0.06	0.10	0.01	0.03	0.05	0.09
Spain	11.95	10.87	30.19	32.43	1.62	15.58	13.90	29.17
Sweden	0.15	0.19	0.58	1.04	0.90	0.93	1.51	2.00
UK	9.36	15.90	63.08	110.40	- 22.69	- 10.84	33.39	79.74
EU28	95	260	534	939	233	345	864	1184

Source: ifo simulations. Scenario S2b models the *status quo* of the current trade conflict.

Table A2

## Changes in sectoral value-added of EU28 member states

	Percent							
	S1a	S2a	S3a	S4a	S1b	S2b	S3b	S4b
Austria	0.001	0.002	0.004	0.007	0.005	0.001	0.005	0.007
Belgium	0.000	0.000	0.000	- 0.001	0.000	0.002	0.002	0.003
Bulgaria	0.000	0.000	0.002	0.003	- 0.001	- 0.001	0.001	0.003
Cyprus	0.004	0.007	0.017	0.027	0.001	- 0.002	0.008	0.016
Czech Rep.	0.003	0.005	0.012	0.021	0.005	0.002	0.011	0.020
Germany	0.001	0.001	0.003	0.006	0.002	0.003	0.007	0.009
Denmark	0.002	0.004	0.009	0.015	0.001	0.001	0.008	0.013
Spain	0.003	0.005	0.010	0.014	0.001	0.004	0.007	0.012
Estonia	0.005	0.007	0.016	0.028	0.002	0.004	0.012	0.023
Finland	0.001	0.002	0.005	0.007	0.005	0.002	0.006	0.010
France	0.000	0.001	0.003	0.006	0.002	0.000	0.005	0.006
UK	0.001	0.003	0.009	0.015	- 0.002	0.000	0.006	0.012
Greece	0.001	0.002	0.005	0.009	- 0.003	0.002	0.003	0.006
Croatia	0.002	0.003	0.007	0.011	- 0.001	0.001	0.003	0.008
Hungary	0.003	0.005	0.015	0.026	0.005	0.005	0.015	0.024
Ireland	- 0.009	- 0.016	- 0.035	- 0.052	0.012	0.011	- 0.004	- 0.020
Italy	0.001	0.003	0.006	0.012	0.005	0.001	0.006	0.011
Lithuania	0.002	0.005	0.010	0.017	- 0.002	0.001	0.006	0.013
Luxembourg	- 0.015	- 0.029	- 0.062	- 0.093	0.009	0.002	- 0.03	- 0.05
Latvia	0.002	0.003	0.008	0.013	- 0.002	0.000	0.003	0.010
Malta	0.003	0.007	0.015	0.025	0.001	0.006	0.013	0.023
Netherlands	0.002	0.005	0.012	0.020	0.001	0.006	0.013	0.019
Poland	0.003	0.005	0.012	0.021	0.001	0.005	0.009	0.016
Portugal	0.000	0.001	0.003	0.006	- 0.001	0.002	0.003	0.005
Romania	0.001	0.002	0.005	0.008	0.003	0.004	0.004	0.008
Slovakia	0.000	0.001	0.002	0.004	0.002	0.002	0.007	0.007
Slovenia	0.004	0.007	0.017	0.027	0.002	0.006	0.012	0.021
Sweden	0.000	0.001	0.002	0.004	0.004	0.003	0.006	0.007

Source: ifo simulations. Scenario S2b models the *status quo* of the current trade conflict.

Table A3

**Changes in EU28 exports to the United States**

	EUR billion							
	S1a	S2a	S3a	S4a	S1b	S2b	S3b	S4b
Austria	0.10	0.18	0.41	0.66	0.02	0.08	0.28	0.52
Belgium	0.14	0.25	0.57	0.91	-0.03	0.04	0.31	0.63
Bulgaria	0.00	0.01	0.02	0.03	0.00	0.00	0.01	0.03
Cyprus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Czech Rep.	0.04	0.08	0.17	0.27	0.01	0.04	0.12	0.22
Germany	1.30	2.25	5.38	8.61	0.18	0.82	3.55	6.64
Denmark	0.08	0.16	0.34	0.54	0.01	0.06	0.21	0.41
Spain	0.13	0.23	0.53	0.85	-0.01	0.05	0.30	0.61
Estonia	0.01	0.01	0.02	0.03	0.00	0.01	0.02	0.03
Finland	0.07	0.14	0.30	0.49	0.01	0.06	0.20	0.38
France	0.36	0.66	1.49	2.39	0.02	0.23	0.94	1.80
UK	0.57	1.04	2.33	3.70	0.01	0.33	1.42	2.73
Greece	0.01	0.01	0.02	0.04	0.00	0.00	0.01	0.03
Croatia	0.01	0.01	0.02	0.03	0.00	0.00	0.01	0.02
Hungary	0.05	0.09	0.21	0.34	0.01	0.04	0.15	0.27
Ireland	0.22	0.42	0.91	1.43	-0.01	0.12	0.53	1.03
Italy	0.44	0.77	1.86	3.03	0.10	0.33	1.29	2.42
Lithuania	0.01	0.02	0.05	0.09	0.00	0.00	0.03	0.06
Luxembourg	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.01
Latvia	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.01
Malta	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01
Netherlands	0.17	0.32	0.71	1.12	0.00	0.11	0.43	0.83
Poland	0.04	0.08	0.18	0.29	0.01	0.03	0.12	0.23
Portugal	0.03	0.04	0.11	0.18	0.00	0.02	0.07	0.13
Romania	0.02	0.03	0.07	0.12	0.00	0.02	0.05	0.09
Slovakia	0.01	0.02	0.06	0.10	0.00	0.01	0.04	0.07
Slovenia	0.01	0.01	0.03	0.04	0.00	0.01	0.02	0.03
Sweden	0.13	0.23	0.52	0.83	0.03	0.11	0.35	0.65

Source: ifo simulations. Scenario S2b models the *status quo* of the current trade conflict. Further bilateral trade changes can be obtained from the authors.

Table A4

**Changes in EU28 imports from the United States**

	EUR billion							
	S1a	S2a	S3a	S4a	S1b	S2b	S3b	S4b
Austria	-0.03	-0.05	-0.10	-0.16	0.01	0.00	-0.05	-0.11
Belgium	-0.11	-0.21	-0.45	-0.69	0.04	-0.01	-0.21	-0.45
Bulgaria	0.00	-0.01	-0.01	-0.02	0.00	0.00	-0.01	-0.01
Cyprus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Czech Rep.	-0.02	-0.03	-0.07	-0.10	0.00	0.00	-0.03	-0.07
Germany	-0.39	-0.72	-1.55	-2.40	0.13	-0.06	-0.75	-1.58
Denmark	-0.02	-0.04	-0.09	-0.14	0.01	0.00	-0.04	-0.09
Spain	-0.08	-0.15	-0.31	-0.48	0.03	-0.01	-0.15	-0.32
Estonia	0.00	0.00	-0.01	-0.01	0.00	0.00	0.00	-0.01
Finland	-0.02	-0.04	-0.10	-0.15	0.01	0.00	-0.04	-0.09
France	-0.28	-0.51	-1.10	-1.69	0.10	-0.03	-0.51	-1.10
UK	-0.32	-0.59	-1.27	-1.96	0.09	-0.07	-0.63	-1.31
Greece	-0.01	-0.01	-0.03	-0.04	0.00	0.00	-0.01	-0.03
Croatia	0.00	0.00	-0.01	-0.01	0.00	0.00	0.00	-0.01
Hungary	-0.02	-0.03	-0.06	-0.10	0.01	0.00	-0.03	-0.06
Ireland	-0.11	-0.19	-0.42	-0.64	0.07	0.03	-0.15	-0.37
Italy	-0.11	-0.20	-0.44	-0.67	0.04	-0.01	-0.21	-0.44
Lithuania	0.00	0.00	-0.01	-0.01	0.00	0.00	0.00	-0.01
Luxembourg	-0.04	-0.07	-0.15	-0.23	0.02	0.01	-0.05	-0.13
Latvia	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00
Malta	0.00	0.00	-0.01	-0.01	0.00	0.00	0.00	-0.01
Netherlands	-0.21	-0.38	-0.83	-1.28	0.08	-0.02	-0.39	-0.83
Poland	-0.02	-0.04	-0.09	-0.15	0.01	-0.01	-0.05	-0.10
Portugal	-0.01	-0.01	-0.02	-0.04	0.00	0.00	-0.01	-0.02
Romania	-0.01	-0.01	-0.03	-0.04	0.00	0.00	-0.01	-0.03
Slovakia	0.00	-0.01	-0.02	-0.03	0.00	0.00	-0.01	-0.02
Slovenia	0.00	0.00	-0.01	-0.01	0.00	0.00	0.00	-0.01
Sweden	-0.05	-0.08	-0.18	-0.28	0.02	0.00	-0.08	-0.18

Source: ifo simulations. Scenario S2b models the *status quo* of the current trade conflict. Further bilateral trade changes can be obtained from the authors.

Floro Ernesto Caroleo and  
Francesco Pastore

## The Italian low-growth conundrum: An assessment and some policy lessons

When commenting on labor market developments, politicians and the media often mention unemployment rates. Indeed, simple comparisons of average values relative to European regions are already harsh, yet they do not give an exact measure of the structural gap that exists among various countries and between the two macro-regions of Italy (the center-north and the lagging south). The main reason why the unemployment rate cannot be considered the only indicator of the structural gap is that, as it is defined and constructed, it is rather a cyclical index of the gap between labor supply and demand.

We would do better to refer to the employment rate. In 2017, approximately 62 in 100 people aged 15–64 were employed in Italy, compared with a European average of 72 (EU28). Figure 1 shows the employment rates of the various countries with female employment rates in descending order. The figure shows that Italy is at the bottom of the ranking and, as far as the female employment rate is concerned, the country comes in fourth from last, preceded by Greece, Macedonia, and Turkey. As regards the gap between men and women, at 20.1 percentage points, our country is just ahead of Malta, Macedonia, and Turkey. If the trend were pointing to a closing of these gaps, the problem would not be so dramatic. However, while the employment rate in Europe (EU28) increased by 5.1 percentage points between 2005 and 2017, it remained almost stable in Italy (+ 0.6%).

As is well known, the Italian economy is characterized primarily by differences between the south and the center-north. Employment

figures give a clear idea of the size of these gaps. Out of 100 people between 20 and 64 years old, 66 or 67 are employed in northern Italy, while only 44 are employed in the south. If we look at the other regions of Europe, this latter figure is quite impressive. In fact, only six European regions have an employment rate below 50%, and four of those are Italian. Moreover, the gap between the region with the lowest employment rate (Calabria) and the region with the highest employment rate (Trentino, South Tyrol) is about 30 percentage points. Out of 100 women, 62 or 63 are employed in the north and 34 in the south. The gap between men and women is about 17 percentage points in the north and 26 percentage points in the south. In Sweden, the employment rate for women aged 20–64 is 78% (Figure 2).

We can therefore draw an initial conclusion: in the south (but also in Italy as compared with the rest of Europe), too few people have jobs. All official economic planning documents also highlight this issue and it is a well-known fact that solving the employment problem will require promoting economic growth and investment. For example, the Italian Ministry of Economy and Finance's Economic and Financial Document 2017 (EFD) clearly states: "the government's priority objective—and that of the budget policy outlined

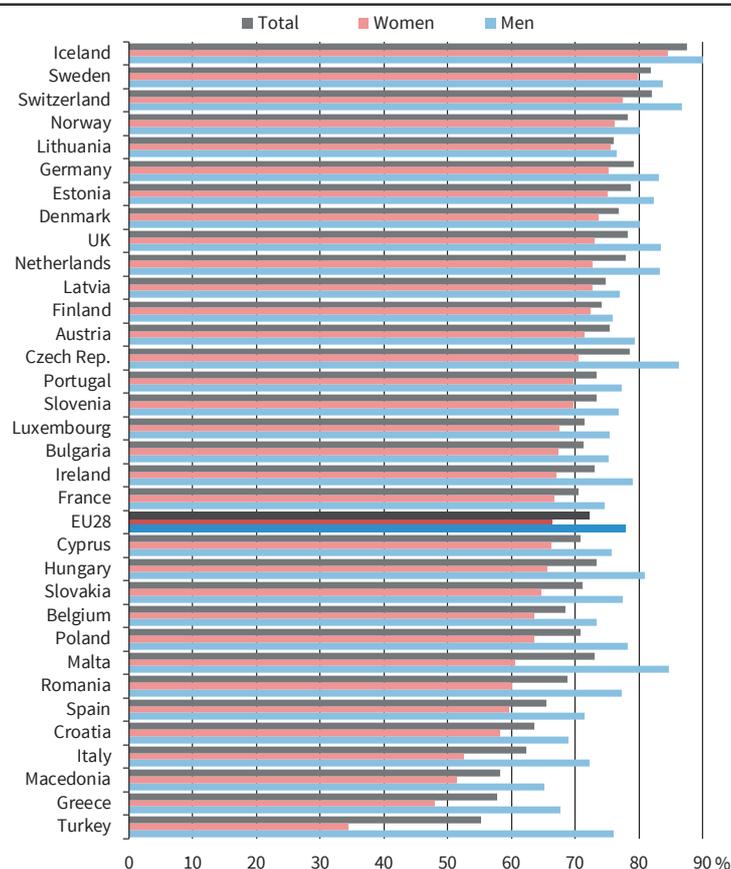


Floro Ernesto Caroleo  
Parthenope Naples  
University



Francesco Pastore  
University of Campania  
Luigi Vanvitelli

Figure 1  
Employment rate in the EU28 (2017)

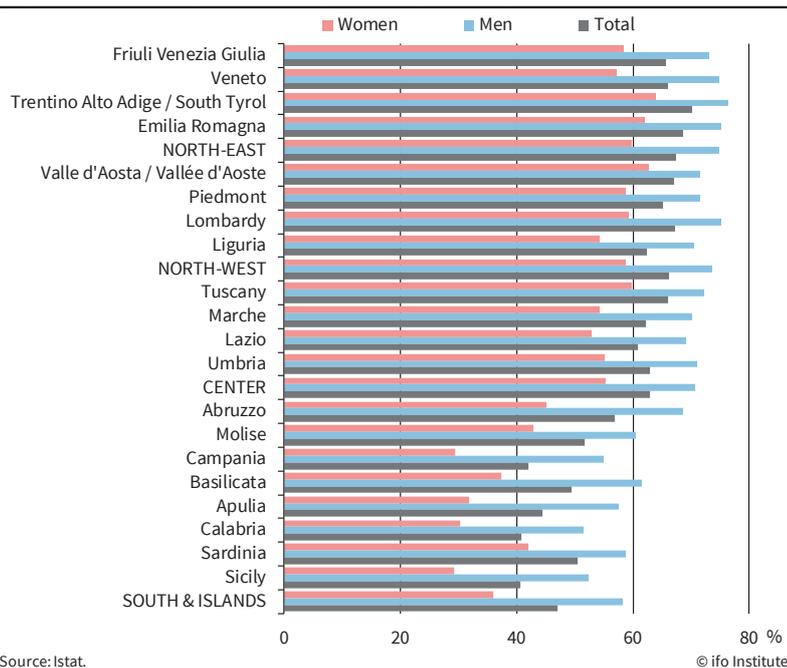


Note: Group by decreasing trend in the female employment rate.  
Source: Eurostat.

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Figure 2

## Employment rate by gender and region in Italy, in the age 15–64 (2017)



Source: Istat.

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in the EFD)—continues to be a steady increase in growth and employment, in respect of fiscal sustainability. ... The government intends to continue in the wake of the economic policies adopted since 2014, with the aims of freeing the country's resources from the excessive weight of taxation and simultaneously relaunching investment and employment, while also respecting the needs for fiscal consolidation. ... The government has also prioritized the continuation of actions to relaunch public investment".<sup>1</sup>

### THE RECIPE: WATER WITHOUT THIRST

However, when we then move on to the solutions for achieving this goal, the words 'investment and employment' disappear. Let us look at what policy makers mean by employment policies. At the international level, there is broad and, since the 1980s, growing consensus regarding a fairly simple solution that is valid for all seasons, both in times of employment growth and in times of crisis such as the present. It is based on the idea that employment problems can be solved by favoring institutional and wage flexibility as much as possible. The reasoning is that today's unemployment (note: not low employment, but too much unemployment) is due to the rigidity of the labor market. Rules on minimum wages, dismissals, and higher unemployment benefits (basically an overly rigid system of laws governing labor relations) result in wage rigidities and therefore do nothing more than

increase the cost of labor for firms (in short, there are too many Article 18s<sup>2</sup> around). What is the solution? Flexibility policies must be adopted to safeguard businesses. Making work cheaper makes it easier to hire workers and, in the end, it cannot help but benefit 'employability' (another very fashionable keyword in Europe, but be careful! It does not necessarily mean more employment).

Several Italian ministers have used a number of expressions to reproach young Italians in recent years: "don't be *bamboccioni*, living with your parents into your mid-30s" (grown-up kids who still live with their parents: Tommaso Padoa-Schioppa); "don't be choosy with the job offers you receive" (Elsa Fornero);

"it is better to marry a rich man than look for a job" (Silvio Berlusconi); "go and play football to grow your informal networks" (Giuliano Poletti); "whoever goes to work abroad would do better to remain there" (Giuliano Poletti); and last but not least: "don't be cunning! If you do not accept a job offer within 100 km from your place, I will not give you the citizenship income". These are nothing more than an expression of the natural way of thinking of those who believe in this kind of reasoning. It is workers and young people who are not adapting to the need to be flexible and earn less. If they did, companies would be very willing to hire them. To cite a well-known metaphor: it is as if merely giving a horse water to drink is sufficient to make it work. Economists and experts in law and organizational behavior are competing to suggest which water is best: that from a well (temporary contracts), running water (contracts with greater protection), mineral water (abolition of Article 18), etc.

The Italian media bombards us daily with news on employment and unemployment trends, highlighting the growth in employment one day, and the next day underscoring how the latest statistics show a decrease in unemployment, but also an increase in youth unemployment, or an increase in employment, but mainly precarious employment. Faced with such news, the government always finds a reason to exalt the salvation effects of its own laws, while the opposition always finds a reason to criticize the disastrous effects of those laws.

<sup>1</sup> See also [http://www.dt.tesoro.it/modules/documenti\\_en/analisi\\_programmazione/documenti\\_programmatici/def\\_2017/Sez.1\\_-\\_Programma\\_di\\_Stabilita\\_2017\\_EN.pdf](http://www.dt.tesoro.it/modules/documenti_en/analisi_programmazione/documenti_programmatici/def_2017/Sez.1_-_Programma_di_Stabilita_2017_EN.pdf).

<sup>2</sup> Art. 18 is the article of the 1970 Italian labor law (*Statuto dei lavoratori*) that provided the right to be reinstated in one's job in the event of an unfair dismissal.

In short, if one were to read all these news reports in succession, one would certainly have a sense of being on a roller coaster. The truth is that all of this water is bad for you: flexibility does not create new jobs, it merely changes the type of employment in favor of more temporary and precarious forms. In fact, no labor reform has ever created a single job in Italy; it has only redistributed work among different categories of workers, changing the convenience of the type of contract to be used for recruitment. The issue, in other words, is that those who deal with labor issues generally take a partial economic balance approach and believe in the market's re-balancing capabilities. Consequently, the unemployment problem can be overcome by intervening in the labor market, removing obstacles (bad information, mismatches, bad institutions, etc.) that prevent the achievement of balance and therefore full employment.

And what if the horse is not thirsty? In other words, could it simply be that there is no demand for jobs and companies are reluctant to invest? If the various labor ministers were less influenced by what is happening in the labor market and had a more balanced approach, looking at the overall economic situation, they could acknowledge that unemployment can also affect the product market (lack of aggregate demand) and that what is happening in the labor market is related to what is happening in the product market.

### MAKING THE HORSE THIRSTY: THE ROLE OF HUMAN CAPITAL

We should ask ourselves whether it is possible to take a different approach to the structural problem of employment in Italy. Tackling this problem would probably mean shedding light on the causes of the current crisis in Italy. The aspects to be investigated include the following questions: what investments

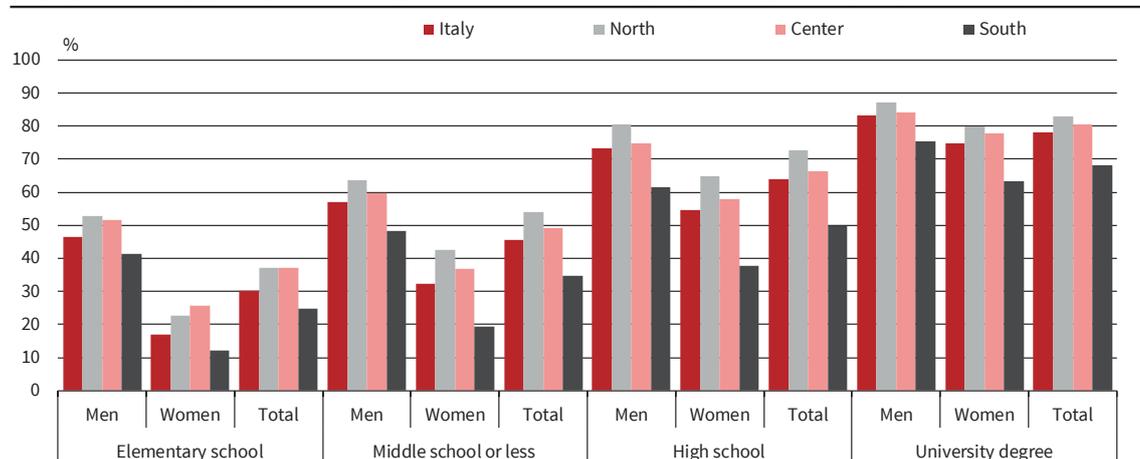
have the greatest effects on growth in the long term?<sup>3</sup> What are the causes of low productivity? The unequal distribution of income, which is eroding rights (to education, health, and work) and thus destroying social capital and producing inequality, also between regions (Franzini and Pianta 2016), should also be addressed.

To stay in the field of labor market issues, more in-depth research should be carried out into what kinds of investments—preferably with high yields and that pay for themselves—can be suggested to improve the quality of the labor supply. Below, we concentrate on one very important example, referring to the works quoted above for other indications regarding which fields to invest in. To give a simple answer to this question, we can take a look at another figure: out of 100 people aged between 20 and 64 in Italy, the probability of a graduate being employed is almost two and a half times greater than that of a person with nothing higher than a secondary school diploma (78.2 vs 30.1). In the south, the probability of a female graduate being employed is even better—almost six times higher than a woman who has only a secondary school diploma (see Figure 3).

The second conclusion, therefore, is that education pays in terms of greater probability of employment. There is thus a very feasible way forward in tackling the issue of investment and employment incentives: investing in human capital. On this point, the governor of the Bank of Italy, Ignazio Visco (2011), stated: “human capital, the investment in knowledge, represents one of the key variables of our economic policy measures. The economic returns, both for individuals and society, cannot be disputed. They are important because of their direct effect on productivity. They are also important for their indirect effects deriving from the interaction between individuals, through a growth in civic sense, respect for rules

<sup>3</sup> See the works of the ‘Crescita, Investimenti e Territorio’ discussion group, Cappellin *et al.* (2014); Cappellin *et al.* (2015).

Figure 3  
Employment rate by gender, educational qualification and macro-regions, in the age 15-64 (2017)



Source: Istat.

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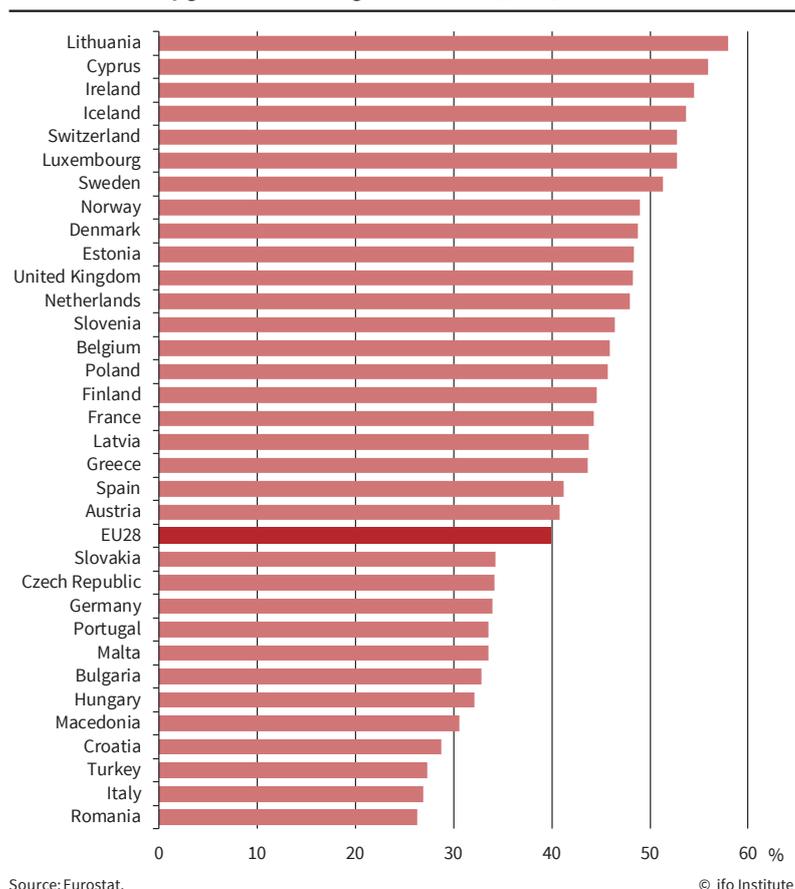
and the affirmation of law, the fight against corruption and crime—all factors which constitute a brake to sustained and continuous economic growth”.<sup>4</sup>

As Pastore (2015 and 2017) also remarks, Europe 2020, the program inspired by the European Union’s Lisbon Strategy, is also very much geared toward human capital, calling for a reduction in the dropout rate from compulsory schooling, still around 14% on average in Italy (4 percentage points above the EU 2020 target), and an increase in the share of school and university graduates, which are at 24%, or 16 percentage points below the EU2020 target. All the research undertaken in this field underscores how the yields from investments in education (both secondary and tertiary) are higher than the yields from investments in infrastructure (Ciccone *et al.* 2004). Some research works have also shown how these investments can play a key

role in regional development (de la Fuente *et al.* 2009; de la Croix and Vandenberghe 2010; CNRS and ZEW 2005) and in that of the southern regions in particular (Carillo and Zazzaro 2001; Ciccone *et al.* 2004). What is more, it has been shown that financial incentives for investment in education and related public expenditure have, in the long run, the capacity to pay for themselves (Ciccone 2009). Time also matters. In fact, if the education system is not reformed quickly in order to adapt human capital to new production needs and new technologies, there is already a concrete risk of rapidly deteriorating the existing one.

Obviously, this is not just a question of quantitative targets such as increasing the share of education spending in GDP. Even if, in truth, pulling Italy out of the penultimate position (before Romania) in the ranking of European countries with the lowest rate of graduates among people aged 30–34 (see Figure 4) or even doing something to bridge the gap (17 points) with the European average percentage of people between 24 and 64 years of age who have at least a secondary school diploma, would already be a macroeconomic target that would make any government nervous that is worthily pushing for reform (see Figure 5). The prob-

Figure 4  
Share of university graduates in the age cohort 30-34 (2017)



lem is also focusing on the qualitative aspects of investment.

Nevertheless, as things currently stand, Italian universities are strongly underfunded, as is pointed out in, among other things, the contributions of a monographic issue of *Scuola Democratica*, with difficulties increasing particularly for universities in southern Italy (Carillo and Pastore 2017). The 2009 Gelmini reform introduced numerous innovations in the Italian university system. On the one hand, the legislator’s endeavors are clearly aimed at improving both research and teaching, but the actual implementation of the new system has also signaled that there is little awareness of the perverse effects that mechanically applied incentive mechanisms can generate within the system. One major problem is the polarization of resources in a few better equipped locations, with a high risk of weakening what can, perhaps, be considered the best side of the existing system, namely the territorial and intersectoral homogeneity of research and teaching. This was an important outcome of the public and national organization desired by the constitutional fathers back in 1946. The feeling is that the reform is still in its infancy and that its measures need fine tuning based on an unprejudiced assessment of both the positive and the negative results achieved thus far.

<sup>4</sup> See also Cipollone *et al.* (2012); Cipollone and Sestito (2010).

For Banfi and Viesti (2017), the inefficiencies are consequences of the underfunding of university research and teaching. This is a problem that must be overcome throughout the country. Carillo and Pastore (2017) make policy recommendations for rectifying the perverse effects of polarization of resources, including:

- a) Universities should not be evaluated based on their past, pre-reform performance, but on what has been done in the post-reform period, taking the different starting points into account. In other words, it is wrong to compare the performance of university graduates without considering the higher education level of high school graduates. One should compare the value added of universities, not their outcomes (see also Ferrante 2017);
- b) Assessment criteria should not be continuously redefined over time so as to enable effective and improved planning of research activities;
- c) Universities should be assessed on the basis of factors that depend on the universities themselves and not on the context in which they operate. For example, it is wrong to assess universities based on the placement rate of their students without taking the potential of the local labor market into account;

- d) It is important to define safeguard clauses in order to prevent excessive fluctuations in the distribution of research funds across universities; and
- e) Taking the quality of teaching into account is also important when evaluating university performance, since teaching has an important impact on skills training, which is one of the main aims of universities.

### REFORMING THE 3 + 2 REFORM

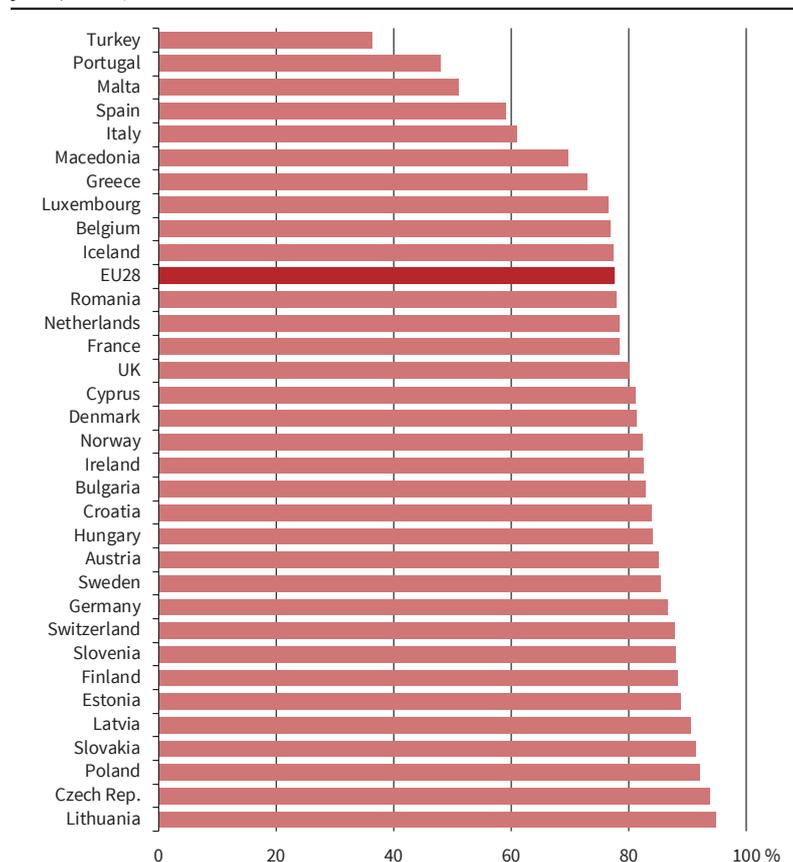
In discussing investments in university education in Italy, two issues should be given particular consideration. First, the organization of today's university is the result of the Bologna Process, which has led to, among other things, the organization of the university cycle according to the 3 + 2 scheme. The aim was not only to shorten the time it takes to obtain a degree and to reduce the dropout rate, but also to combine methodological and cultural preparation with highly professional training in order to give students opportunities to immediately enter the working world.

Almost two decades have now passed since the reform was implemented, but this goal does not seem to have been achieved yet. Here, too, numerous figures show how incomplete and unrealizable the reform is. For example, according to the Anvur

Report 2016 on the state of universities, Italy is still the only OECD country without a professional degree, or to use the German definition, without a university of applied science (the so-called *Fachhochschule*). What is more, the student dropout rate is around 42%—that is, 12 percentage points more than the EU average. The percentage of school graduates who enroll in university is 42% in Italy, about 21 percentage points less than the EU average. At the same time, enrollment has plummeted, especially in certain faculties, such as law, and this trend has shown only slight signs of reversal in recent academic years.

A series of factors have transformed a major and well-planned reform into a boomerang due to incoherent application, such as a lack of fully professional three-year courses, meandering and repetitive three-year and two-year program, lack of three-year course recognition for

Figure 5  
Share of the population with at least a high secondary school diploma (age 24-64 years, 2017 )



Source: OECD.

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job-access purposes, resulting in too-high a percentage of students having to continue with the two-year course—in 2012/13, 51.1% of all three-year graduates, and 57.9% if the degree in nursing is excluded. The latter figure was 68.9% in 2003/04, when the three-year degree was even less recognized than it is today.

In other words, both the teaching staff and the university system as a whole do not seem to have fully understood how the various cycles (3, 2, master, doctorate, etc.) should be structured and designed in order to achieve, in each, a better link with the labor market. In essence, it is as if university education were still single cycle. The most striking example is the return to the single cycle of the degree course in law. Thus, if we were to invest in the university system, it would be a good idea to plan professional study courses starting from level one. This means courses aimed at providing professional skills that can be immediately used in the labor market. This way, as the reader will easily appreciate, the objective of the Bologna Process to shorten graduation time would be achieved with a very definite benefit in terms of economic and social costs.

In the long run, all this affects the number of student dropouts. If one seriously puts oneself in the position of students, families, and enterprises, it is easier to appreciate that the decision to invest in education does not depend on *ex post* yields, i.e. those expected by graduates, who in any case are an *elite* group, but on those *ex ante* by enrolled students, as obtained by multiplying the *ex post* by the probability of obtaining a degree. For some students, the gap is significant and the yield tends to reduce itself to zero for the weaker ones (Altonji 1993; Pastore 2018b).

### TIES WITH THE WORKING WORLD

The second issue that should be addressed is the definition of human capital. This is the set of acquired skills, accumulated knowledge, and attitudes that make the individual more productive, rather than simply education *per se*. The close relationship between education and human capital is also quite well known. However, considering only these two variables would mean neglecting other factors that strongly influence the processes of formation and exploitation of an individual's potential, such as the accumulation of work experience—the other side of human capital. The problem with young people dropping out of the school and university system is that they face a typical skill gap problem in the transition process from school to work. In other words, the level of education being equal, they suffer from a lack of generic work experience (work discipline, respect for working hours, team work, etc.) and, above all, from the specific experience relating to a given job (knowledge of the production process and the technologies used), which schools and universities do not provide. This component of human capital is not

acquired in university classrooms, but inside companies, and therefore requires an increasingly stronger link between school and university on the one hand and enterprises on the other (Pastore 2015; Caroleo and Pastore 2018).

But here, too, we must make a distinction. It is the Italian university system that is not equipped to provide professional experience to young people during their educational career. There are countries in Europe, such as Germany, that instead adopt dual training systems at all levels of education, i.e. training based on the alternation of classroom teaching and work experience. This makes the transition between school and work easier, as young people can already gain work experience during their school years that is immediately usable on the labor market. It is no coincidence that the employment rate of young people in Germany is among the highest in Europe, and the unemployment rate is among the lowest, close to that of adults (Zimmermann *et al.* 2013; Eichhorst *et al.* 2015; Pastore 2015 and 2018a). If resources were to be 'spent' on investments in human capital, it would be desirable to strengthen the function of universities in job orientation and planning through curricular training apprenticeships, internships, etc. As has already been said, the benefits would be to improve the transition between universities and the working world, but also the incentive to create a network of relationships and exchange of know-how with the business system.

In Italy, in 2015, the 'good school' law introduced the principle of alternating school and work into secondary education (a practically zero-cost reform) in the form of work-related learning and a trial period for a four-year diploma course. The hope is that the current populist government will not cancel these projects, but rather will fund them adequately and further develop them (Giubileo 2016; Maisto and Pastore 2017; Giubileo and Scarano 2018). What are the consequences for universities? Unless the university system prepares itself for the introduction of these principles—developing shorter degree courses, work-related learning, and other forms of interaction with the world of work—it runs the risk, in a few years' time, of having to once again put students who, during their secondary schooling, obtained work experience and interacted with the working world and who have benefitted from innovative forms of teaching, behind a desk for five more years.<sup>5</sup>

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Darek Klonowski

# How venture capitalists may impair the entrepreneurial ecosystem throughout their investment process<sup>1</sup>



Darek Klonowski  
Brandon University

## INTRODUCTION

Business newspapers and magazines often mythologize venture capital (VC) and VC-backed entrepreneurial firms such as Google, Groupon, Zynga, Dell, Intel, Microsoft, Federal Express, Home Depot, Starbucks, and many others. The mainstream popularity of venture capital is often manifested in television programs, such as *Dragon's Den* and *Shark Tank*, with the result that VC partners such as Michael Moritz, John Doerr, Vinod Khosla, and Peter Thiel are often glamorized beyond rationality and maintain 'rock star' status in the business world. VC partners have even been presented as a 'super breed' of financial intermediary. Mainstream media promotes VC by illustrating its spectacular successes, perhaps deceptively implying that these are the standard outcomes of VCs' participation in entrepreneurial ventures. However, this optimistic perception of the average VC firm is ill founded.

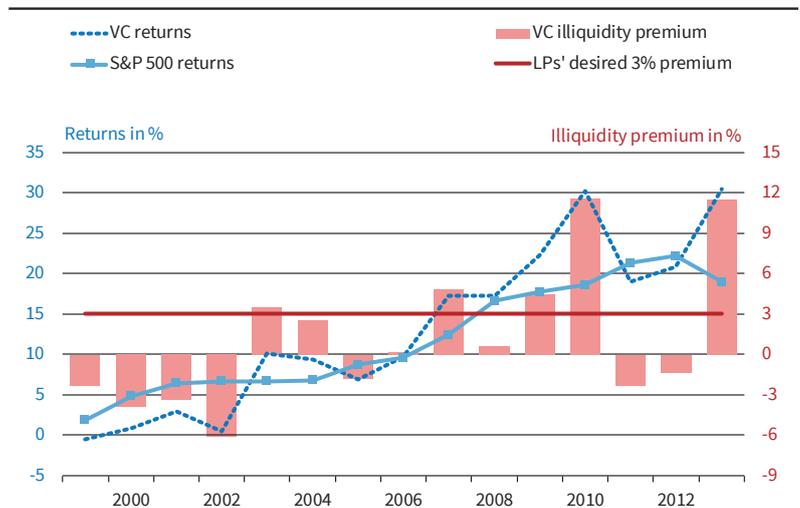
Today, VCs are breaking two promises: the one made to their own investors (called limited partners, or LPs) and the one made to entrepreneurs. First, the vast majority of VCs have broken the 'promise', or expectation, of outsized returns to their own LPs (i.e. pension funds, endowments, insurance companies, foundations, and so on). LPs expect to generate at least 3% more from VC investments compared with

returns from public equities markets to compensate for additional risks and long periods of illiquidity, normally referred to as the 'illiquidity premium'. Yet the average VC firm is not able to meet these minimum requirements from LPs. For example, the illiquidity premium for the 15-year period between 1999 and 2013 totaled a meagre 1.2% in the United States (see Figure 1). While the VC industry often purports its value creation process to take the form of a J-curve, evidence suggests that the average VC firm's return performance may actually resemble an n-arc (see Figure 2). In reality, the J-curve may apply to only about 10% of VC firms. This n-arc reflects the reality of the chronically poor performance of the average VC.

In terms of operational statistics, VCs achieve a track record of about two-six-two on their portfolio of investee firms: two or even one sound investment, six investments that grossly underperform, and two total write-offs. In a nutshell, 'expert' investors are getting it right roughly one or two out of ten times. Of course, VCs naturally hope that one or two superstar returns will more than compensate for their underperformers. The poor performance of VCs is even more astonishing considering that these firms claim to spend substantial time and expense investigating investment opportunities, make significant value-adding contributions, and time public markets exceptionally well. It is no surprise that LPs are increasingly beginning to question the validity of the venture capital model, or simply avoiding this asset class entirely.

Most significantly, VCs have broken the promise of value creation to entrepreneurs; VCs are not as true today as they once were to their foundational maxim of being in the 'business of building business'. The media's promotion of VC has perpetu-

Figure 1  
Financial returns from venture capital and private equity in the United States 1999-2013



Note: Calculations are made on the basis of data from Cambridge Associates (www.cambridgeassociates.com).

Source: Adopted from Klonowski (2018).

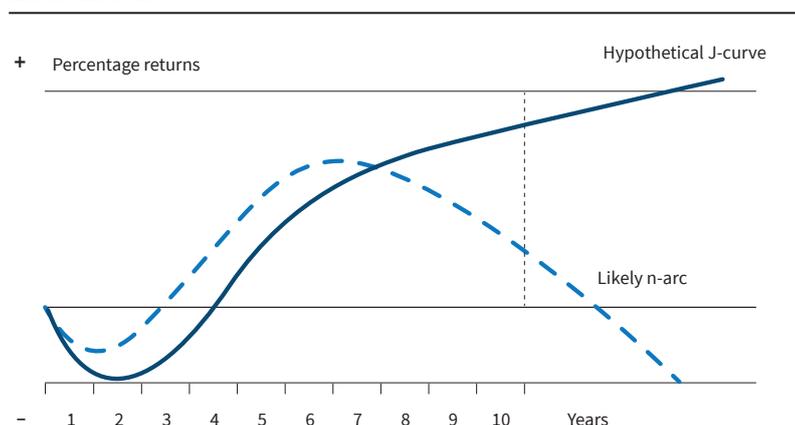
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<sup>1</sup> This article is based on Klonowski (2018).

ated the view among entrepreneurs that their firm must obtain venture capital in order to make it big in the marketplace. Consequently, entrepreneurs internalize the belief that their ultimate goal is to raise venture capital, perhaps hoping that the underlying business will then develop itself. But an entrepreneurial firm's experience with the average VC is likely to be a disappointing endeavor in terms of both financial performance and value creation. Since VCs often exhibit a 'batting average' and 'spray-and-pray' mentality toward investing, they often quickly lose interest in underperforming entrepreneurial firms. VC investing resembles more of a roulette-like search for megahits, where underperformers (or VC 'casualties') do not really matter, rather than an orchestrated, well calibrated, and repeatable method of value creation. If the entire industry takes such a singular approach or exhibits this behavior on a large scale, VCs may actually impair the entrepreneurial ecosystem.

This article focuses on illuminating why the average VC firm may impair value creation in entrepreneurial firms. The analysis looks at the VC investment process, or the VC value chain, which consists of five stages: deal generation, screening and evaluation, deal completion, monitoring, and exit. It is along this value chain that potential value creation turns into value destruction, profits turn into losses, and robust returns become 'subprime' returns. This analysis confirms that the venture capital model is not just broken, but completely malfunctioning. The issue of VC underperformance is important to LPs, who provide capital to VCs by paying nearly USD 24 billion in annual management fees, and to entrepreneurs, who depend on VCs to provide valuable hands-on assistance that converts into entrepreneurial value creation. Reviewing the VC value chain can illuminate where value destruction or deformation is likely to occur.

**Figure 2**  
Comparison of the distribution of venture capital returns across theoretical 'J-curve' and actual 'n-arc'



Source: Adopted from Klonowski (2018).

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## DEAL GENERATION: CONFLICTS BETWEEN NATURAL AND ACCELERATED MODES OF ENTREPRENEURIAL DEVELOPMENT

Deal generation is regarded as one of the most important functions in the venture capital investment process. During this part of the VC process, entrepreneurs become the 'lifeblood' for VCs. And yet, if an entrepreneur is contacted by an interested VC firm, it may not be time to celebrate just yet. Why is that? First, VCs frequently look for entrepreneurial firms where they can 'unnaturally' accelerate their development, which is driven by VCs' short-term orientation. VCs typically believe that the decisions and actions of entrepreneurial firms must be governed by speed, while often wrongly assuming that natural business development can be changed or hurried. Natural entrepreneurial development, based on adaptation, maturation, and even failure, may be incompatible with the accelerated value creation promoted by VCs, which is often based on 'pump-and-dump' or 'growth on steroids' strategies. VCs fail to recognize that developing entrepreneurial firms at an excessively fast pace often destabilizes the business and magnifies risks. As such, this uncontrolled, haphazard, and chaotic growth may be fatal to entrepreneurial firms.

Second, while pursuing the notion of accelerated value creation, VCs often overfund firms they ultimately choose to finance. This often causes entrepreneurial firms to increase their burn rate, delay testing new products and services (with real, paying customers), disperse their financial resources among too many projects, or overspend on unanticipated and superfluous items. Too much capital in a company's developmental stages can be detrimental to its inner entrepreneurial discipline, efficiency, and flexibility.

Third, VCs often exhibit a herd mentality when generating deals. If deals in a specific sector become successful, or if other expert VCs identify a particular sector of the economy as attractive, VCs uncritically pursue these opportunities by flooding the market with capital, effectively cannibalizing their own chances of success and initiating their own demise. In practice, however, the most attractive VC returns may actually be generated from the outlier sectors of the economy rather than those Wall Street has identified as attractive.

## SCREENING AND EVALUATION: MISGUIDED ANALYSIS OF ENTREPRENEURIAL FIRMS

In order to filter through the vast majority of funding pro-

posals from entrepreneurial firms, VCs engage in a process called screening and evaluation, or more simply, due diligence. However, there are numerous problems with VC due diligence, the most significant of which is that VCs do not have the relevant business experience. As a result, VCs have severe problems evaluating business plans or assigning appropriate valuations to firms. The vast majority of VCs come from finance, consultancy, or generalist backgrounds, have inadequate hands-on industry experience, and demonstrate limited executive know-how. Without suitable experience, VCs can rely only on their best judgment, loosely formulated opinions, personal intuition, and other subjective decision-making processes. Notable exceptions to this knowledge deficiency in the VC community are individuals with industry experience, individuals who have operated their own businesses, and professionals that come from different educational backgrounds, such as engineering, science, computer technology, and the like (this category of venture capitalists is referred to as business companions in Table 1). However, VCs with these capabilities make up less than 10% of the professional VC pool. Research evidence also confirms that VCs are overconfident investors who demonstrate a high probability of making wrong investment decisions.

Moreover, VCs' decision-making reliability and accuracy actually diminishes over time due to their relatively shallow pool of decision-making experience to draw from. Because their decisions are subject to delayed feedback, their decision-making apparatus cannot be properly calibrated. In addition to a lack of experience, VCs also suffer from multiple biases. VCs use cognitive shortcuts rather than relying on systematic, extensive, and in-depth research based on scientific evidence. VCs are not alone though, as cognitive psychology confirms that other professionals, including medical doctors, engineers, judges, and managers, also suffer from this cognitive impairment. Due diligence is often problematically discrete, focused on the minutia rather than the bigger picture, and disconnected, as advisors rarely talk to each other.

And finally, VCs notoriously reject firms that are later supported by other VCs and become successful; VCs frequently admit that they do not know which investments are likely to generate a financial windfall. A list of start-ups rejected by VCs includes some of the most prominent ventures in existence today: Apple, Airbnb, Cisco, Dell, eBay, Fitbit, Groupon, Twitter, and so on. While the reason for deal rejection may be perfectly justifiable after a thorough investigation of the investment opportunity, this rejection is often the result of unsubstantiated opinions and judgments reached shortly after a brief meeting with entrepreneurs or after a short glance at their business plan. Some of the greatest VC 'misses' in the United States are described by Bessemer Venture Partners in their 'anti-portfolio', perhaps the only honest disclosure of this kind in the VC world.

**DEAL COMPLETION: INEQUALITY IN VENTURE CAPITAL CONTRACTS**

The next phase of the venture capital process is deal closing or completion. Here, VCs and entrepreneurs engage in a lengthy negotiating process that culminates in the signing of a complex legal agreement; this agreement guides the future interaction between the two parties. There are multiple problems with this accepted legal construct that can later contribute to value destruction. First, VCs often take a standardized approach to venture capital contracting, and through these rights and provisions, they aim to control virtually every aspect of an entrepreneurial firm's decision making. This standardized approach to financial contracting often reflects venture capitalists' underlying weakness of being unable to properly assess the business, commercial, financial, and legal risks inherent in financing entrepreneurial firms.

Second, VCs often secure disproportionate and one-sided protections, with many clauses dealing with downside protections exclusively for VCs. The most draconian clauses include change of control provisions, the right to terminate the founder or the man-

Table 1

**Profiles of venture capitalists and their value 'additions' across a range of business processes in entrepreneurial firms**

VC profile	Capital budgeting	Project management	Training & development	Knowledge & IP management	Hiring & promotion	Resource procurement	Relationship management	Strategic planning	Business reviews	Monitoring & control
Financial propeller heads (58.4%)	★	★	★	★	★	★★	★	★	★	★★
Untested promoters (28.0%)	★	★★	★	★★	★	★★	★	★★	★★	★★★
Entrepreneurial disconnectors (7.6%)	★★	★★★★	★★	★★★	★★★	★★	★★	★★★★	★★★	★★★★
Business companions (6.0%)	★★★	★★★★★	★★	★★★★	★★★★	★★★	★★★★	★★★★★	★★★	★★★★★

Note: This table was prepared on the basis of a review of 250 profiles of venture capitalists from 11 major funds in the United States. The number of asterisks in the figure (ranging from one to five) below each business process represents the extent to which different types of venture capitalists have the background to provide valuable hands-on assistance to entrepreneurs in a specific business process.

Source: Adopted from Klonowski (2018).

agement team, and ‘drag-along’ exit rights, meaning the right to sell the entire entrepreneurial firm to a willing buyer. These excessive rights and controls in VC contracting may simply be overcompensating for VCs’ insecurity and lack of expertise rather than actually addressing problems relating to VCs’ poor access to information, or asymmetric information.

Last and most importantly, VCs believe that their strong and one-sided legal protections obviate the need to build a positive and nourishing relationship with entrepreneurs. This overreliance on legal terms rather than proper interpersonal rapport can be disastrous to entrepreneurial ventures if unanticipated problems arise. In the absence of proper interpersonal foundations between the two sides, destruction of the business value is likely to occur.

### **MONITORING: VENTURE CAPITAL’S SUBOPTIMAL ADVICE TO ENTREPRENEURIAL FIRMS**

To distinguish themselves from other forms of financing, VCs promote themselves as active, hands-on, and value-adding financiers; this promise of hands-on involvement contains assurances of regular assistance for entrepreneurial firms. However, actual entrepreneurial experience with VCs presents a very different picture. In practice, this promise by VCs is not fulfilled, and entrepreneurs quickly discover that VCs overpromise and underdeliver. This part of the process is the one that can potentially destroy the most value in entrepreneurial firms. Most importantly, as noted above, the vast majority of venture capitalists lack real-life, business-grounded operations experience, preventing them from making meaningful, value-adding contributions to these firms (see the three suboptimal types of venture capitalists mentioned in Table 1: financial propeller heads, untested promoters, and entrepreneurial disconnectors; note that, of these three VC types, entrepreneurial disconnectors are the most user-friendly companions to entrepreneurial firms).

VCs have tight time constraints, and evidence suggests that the average VC is able to dedicate only a few hours per month to each portfolio firm, which is insufficient to make any significant difference or develop any meaningful relationship with the founders or managers. Furthermore, VCs may even impede entrepreneurial development by giving erroneous operational advice, providing ill-founded strategic guidance, or establishing unsuitable operational constraints. As their interactions with VCs increase, entrepreneurs often swiftly realize that they have more expertise than venture capitalists when it comes to their industry, products, and competitors. Many entrepreneurs also come to recognize that they are being unjustifiably ‘forced’ to take strategic and operational advice from non-experts, and that VCs too often act as ‘financial bureaucrats’ rather than value-adding participants in entrepreneurial development, which creates conflicts and value deterior-

ation. As a result of their suboptimal involvement, VCs may actually expose investee firms to excessive operational, strategic, and financial risks.

VCs’ standard *modus operandi* involves their alleged professionalization of entrepreneurial firms. This generic process often involves replacing the founding CEO, hiring temporary ‘professional’ managers who often leave after a liquidity event, employing various external consultants, and implementing stock-option programs primarily to preselected individuals, including their own appointed CFOs. These efforts are typically window dressing options focused on achieving a short-term value boost rather than long-term value creation.

Finally, it is important to note that, despite frequent claims by VCs, they do not create innovation in entrepreneurial firms. VCs follow innovation rather than precede it, and perpetuate innovation that already exists in entrepreneurial firms. In fact, evidence suggests that VCs’ short-term determinism, focus on profit (the ‘tyranny of the bottom line’), and quick-exit orientation often result in less innovation, commercialization, and investment in long-term R&D. VCs also appear disinterested in promoting innovation across the majority of industries where long-term development cycles and financial commitments are required. Instead, they are attracted to firms that offer incremental modifications to their existing products, and services that ‘plug holes’ in specific sectors of the marketplace. The most incriminating evidence of VCs’ attitudes toward innovation can be seen in the fact that patent registrations actually decline or even disappear once VCs begin to work with their investee firms.

The most extreme manifestation of VCs’ value-destroying nature can be found in the multiple lawsuits that have been filed against venture capitalists for a wide range of problematic and unethical behaviors. Academics confirm that lawsuits involve some of the biggest players in the VC industry.

### **EXIT: COMPROMISED VALUE REALIZATION IN VENTURE CAPITAL**

The last phase of the VC investment process involves the actual conversion of the illiquid investment into cash. This end of the VC investment process is the conclusion of an often strenuous business relationship between VCs and entrepreneurs. It is important to reiterate that strong exit scenarios that culminate in superb value creation occur infrequently; compromised and distressed cases are a far more regular occurrence in VC.

The average entrepreneur will observe multiple adverse behavior patterns in venture capitalists, including exiting prematurely, losing focus on entrepreneurial firms’ long-term strategic and operational objectives in order to seek a short-term increase in profits and cash flow, and window dressing or ‘dress-

ing up the bride'. In preparation for exit, VCs may attempt to improve the bottom line by aggressively reducing expenses through eliminating the sales department, product development, and other business functions. While such practices may be acceptable to VCs, they are inevitably destructive to the long-term success of an entrepreneurial venture.

### CONCLUSION

Although the average VC today is not interested in change, entrepreneurs may be able to trigger a change in their behavior by completely rejecting VCs as a prime or even desirable mode of entrepreneurial finance. It is important to remember that, despite the media hype and euphoria about VC, VCs make a relatively small contribution to entrepreneurial development. In the United States, for example, only one in 1,541 entrepreneurial firms receives VC, which is less than 1% of entrepreneurs' financial needs (in Germany: 1,609; UK: 2,370; France: 3,146). And yet, however small an impact they have, VCs can be detrimental to entrepreneurial firms no matter how glamorously the media portrays these 'rock stars of the financial realm'.

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Chang Woon Nam\*

# World economic outlook for 2019 and 2020

According to the latest IMF world economic outlook,<sup>1</sup> global output is estimated to have grown by 3.7% in 2018 despite weaker performance in some Asian and European economies. The global economy is projected to grow by 3.5% in 2019 and by 3.6% in 2020. The anticipated growth rate for advanced economies drops from 2.3% in 2018 to 2.0% in 2019 and 1.7% in 2020. Apart from the negative effects of tariff increases recently enacted in the United States and China, growth in the euro area has slowed significantly, particularly for its leading economies such as Ger

\* ifo Institute.

<sup>1</sup> IMF World Economic Outlook Update January 2019, <https://www.imf.org/en/Publications/WEO/Issues/2019/01/11/weo-update-january-2019>.

Table 1

## Overview of world economic outlook projections (%)

	2017 <sup>a</sup>	2018 <sup>a</sup>	2019 <sup>b</sup>	2020 <sup>b</sup>
World output	3.8	3.7	3.5	3.6
<i>Advanced economies</i>	2.4	2.3	2.0	1.7
US	2.2	2.9	2.5	1.8
Euro area	2.4	1.8	1.6	1.7
Germany	2.5	1.5	1.3	1.6
France	2.3	1.5	1.5	1.6
Italy	1.6	1.0	0.6	0.9
Spain	3.0	2.5	2.2	1.9
Japan	1.9	0.9	1.1	0.5
UK	1.8	1.4	1.5	1.6
Canada	3.0	2.1	1.9	1.9
Other advanced economies	2.8	2.8	2.5	2.5
<i>Emerging market and developing economies</i>	4.7	4.6	4.5	4.9
Commonwealth of Independent States	2.1	2.4	2.2	2.3
Russia	1.5	1.7	1.6	1.7
Excluding Russia	3.6	3.9	3.7	3.7
Emerging and developing Asia	6.5	6.5	6.3	6.4
China	6.9	6.6	6.2	6.2
India	6.7	7.3	7.5	7.7
ASEAN5 <sup>c</sup>	5.3	5.2	5.1	5.2
Emerging and developing Europe	6.0	3.8	0.7	2.4
Latin America and the Caribbean	1.3	1.1	2.0	2.5
Brazil	1.1	1.3	2.5	2.2
Mexico	2.1	2.1	2.1	2.2
Middle East, North Africa, Afghanistan, and Pakistan	2.2	2.4	2.4	3.0
Saudi Arabia	-0.9	2.3	1.8	2.1
Sub-Saharan Africa	2.9	2.9	3.5	3.6
Nigeria	0.8	1.9	2.0	2.2
South Africa	1.3	0.8	1.4	1.7

Note: <sup>a</sup> Estimates; <sup>b</sup> Projections; <sup>c</sup> Indonesia, Malaysia, Philippines, Thailand, and Vietnam.

Source: IMF.

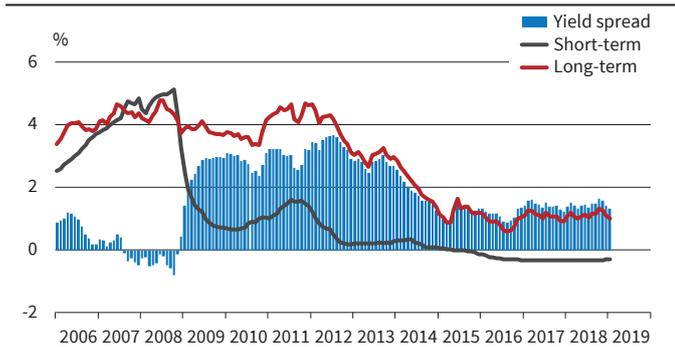
many, following the introduction of new automobile fuel emission standards, as well as Italy, where concerns about sovereign and financial risks have weighed on domestic demand. Moreover, Brexit continues to create additional uncertainty in the EU. Compared with 2018, economic growth in the US and Japan is also likely to slow in 2019 and 2020 (see Table 1).

For the group of emerging and developing countries, growth is expected to fall to 4.5% in 2019 (from 4.6% in 2018) and improve to 4.9% in 2020. Despite fiscal stimuli that offset some of the effects of higher US tariffs, the Chinese economy will slow due to the combined impact of the necessary tightening of financial regulation and trade barriers with the United States. The Indian economy appears to be expanding in 2019, benefiting from lower oil prices and slower monetary tightening than previously expected as inflationary pressures ease.

According to the IMF, the main common policy priority is for countries to resolve their trade disputes and the resulting political uncertainty quickly and in a cooperative manner instead of further raising harmful barriers and destabilizing an already slowing world economy. In all economies, measures to increase potential output growth, improve inclusiveness, and strengthen fiscal and financial buffers in an environment of high debt burdens and tighter financial frameworks are essential.

# Financial conditions in the Euro area

Nominal interest rates <sup>a</sup>

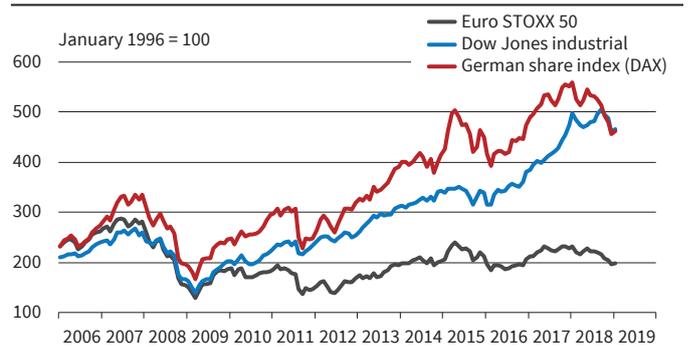


<sup>a</sup> Weighted average (GDP weights).  
Source: European Central Bank.

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In the three-month period from November 2018 to January 2019 short-term interest rates remained rather stable: the three-month EURIBOR rate amounted to - 0.32% in November 2018, and -0.31% in both December 2018 and January 2019. In comparison the ten-year bond yields declined from 1.25% in November 2018 to 1.01% in January 2019, while the yield spread also decreased from 1.57% to 1.32% in the same period of time.

Stock market indices

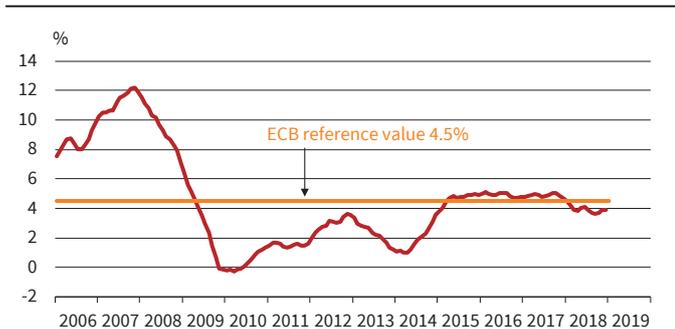


Source: Deutsche Börse; Dow Jones; STOXX.

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The German stock index DAX increased in January 2019, averaging 10,951 points compared to 10,793 points in December 2018. The Euro STOXX also increased from 3,050 to 3,085 in the same period of time. The Dow Jones Industrial was not an exception: it also increased, averaging 24,146 points in January 2019, compared to 23,768 points in December 2018.

Change in M3 <sup>a</sup>

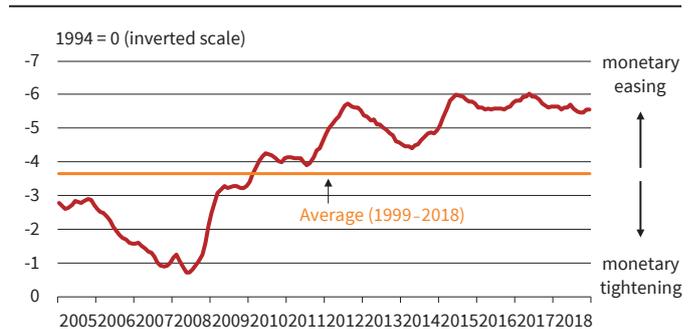


<sup>a</sup> Annual percentage change (3-month moving average).  
Source: European Central Bank.

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The annual growth rate of M3 decreased to 3.8% in January 2019, from 4.1% in December 2018. The three-month average of the annual growth rate of M3 over the period from November 2018 to January 2019 reached 3.9%.

Monetary conditions index



Note: MCI index is calculated as a (smoothed) weighted average of real short-term interest rates (nominal rate minus core inflation rate HCPI) and the real effective exchange rate of the euro.  
Source: European Central Bank; calculations by the ifo Institute.

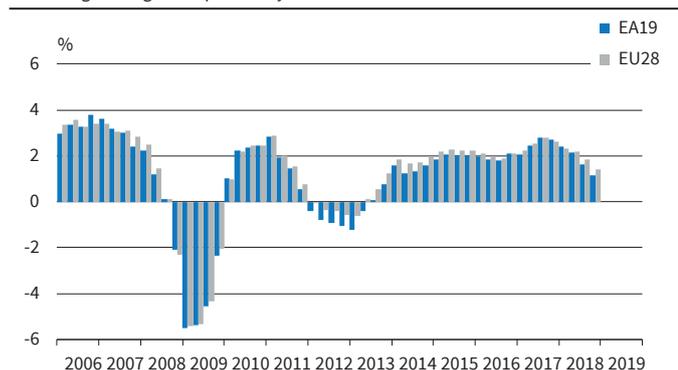
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Between April 2010 and July 2011, the monetary conditions index remained rather stable. This index then continued its rapid upward trend since August 2011 and reached its first peak in July 2012, signaling greater monetary easing. In particular this was the result of decreasing real short-term interest rates. In May 2017 the index reached the highest level in the investigated period since 2004, and its slow downward trend thereafter continued, although a minor increase was observed in November and December 2018.

# EU survey results

## Gross domestic product in constant 2010 prices

Percentage change over previous year



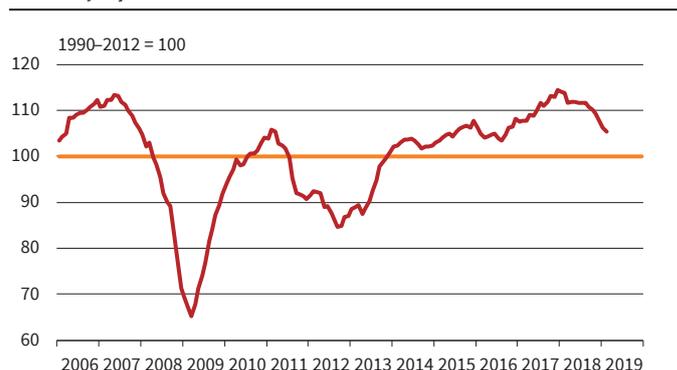
Source: Eurostat.

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According to the Eurostat estimates, GDP grew by 0.2% in both the euro area (EA19) and the EU28 during the fourth quarter of 2018, compared to the previous quarter. In the third quarter of 2018 the GDP had grown by 0.2% in the euro area and by 0.3% in the EU28. Compared to the fourth quarter of 2017, i.e. year over year, seasonally adjusted GDP rose by 1.2% in the EA19 and by 1.4% in the EU28 in the fourth quarter of 2018.

## EU28 economic sentiment indicator

Seasonally adjusted



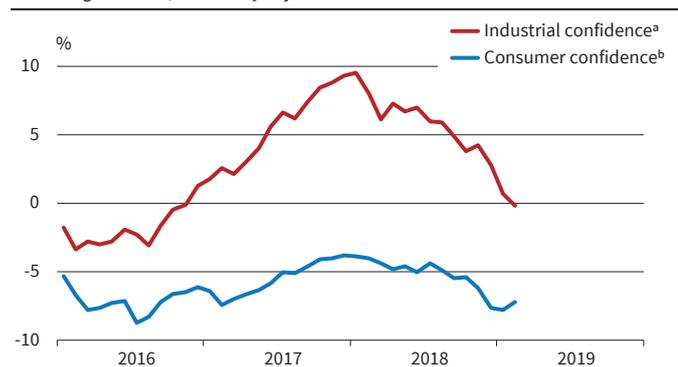
Source: European Commission.

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In January 2019 the Economic Sentiment Indicator (ESI) decreased in both the euro area (by 1.2 points to 106.2) and the EU28 (by 1.4 points to 106.1). In both zones the ESI stands above its long-term average.

## EU28 industrial and consumer confidence indicators

Percentage balance, seasonally adjusted



Source: European Commission.

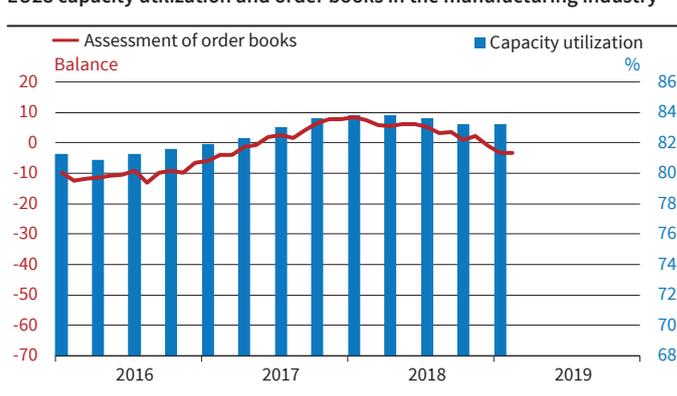
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In January 2019, the industrial confidence indicator decreased by 2.2 in the EU28 and by 1.8 in the euro area (EA19). The consumer confidence indicator decreased by 0.2 in the EU28 but increased by 0.4 in the EA19 in January 2019.

<sup>a</sup> The industrial confidence indicator is an average of responses (balances) to the questions on production expectations, order-books and stocks (the latter with inverted sign).

<sup>b</sup> New consumer confidence indicators, calculated as an arithmetic average of the following questions: financial and general economic situation (over the next 12 months), unemployment expectations (over the next 12 months) and savings (over the next 12 months). Seasonally adjusted data.

## EU28 capacity utilization and order books in the manufacturing industry



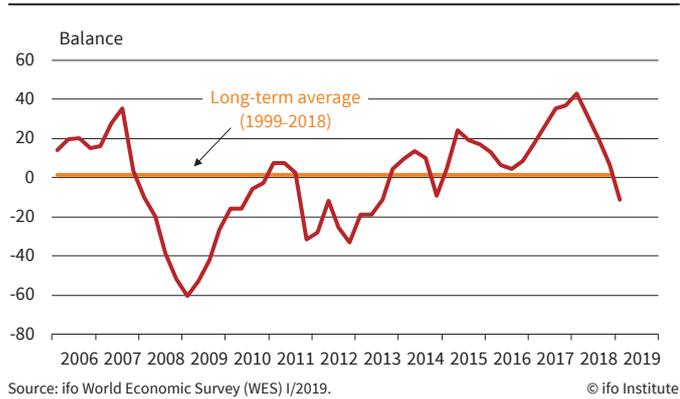
Source: European Commission.

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Managers' assessment of order books reached - 3.4 in February 2019, compared to - 3.3 in January 2019. In December 2018 the indicator had amounted to - 1.0. Capacity utilization amounted to 83.2 in the first quarter of 2019, stable compared to the fourth quarter of 2018.

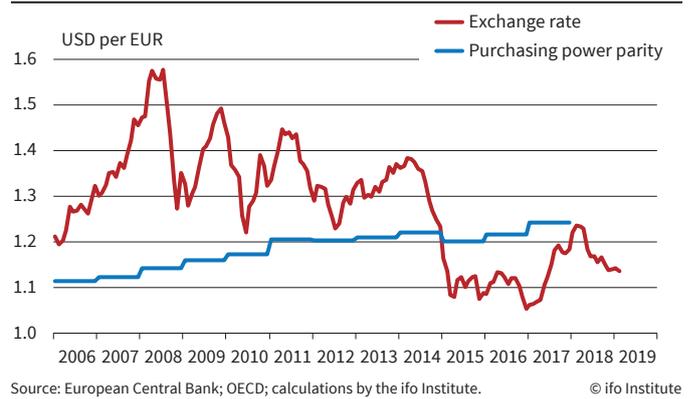
# Euro area indicators

## ifo economic climate for the Euro area



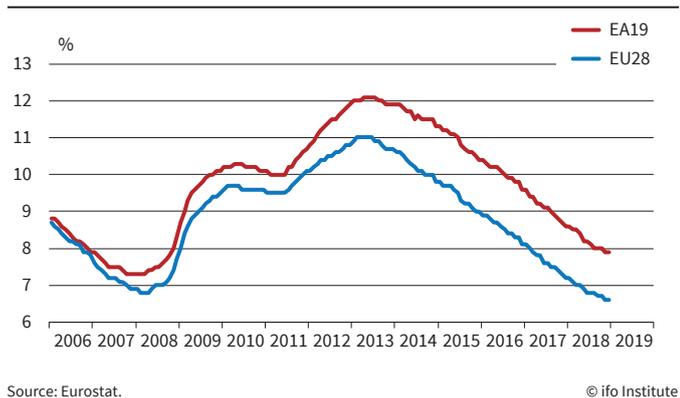
The ifo Economic Climate for the euro area (EA19) fell from 6.6 points in the third quarter of 2018 to - 11.1 points in the fourth quarter of 2018, dipping below zero for the first time since 2014. Experts are more pessimistic about the current situation and future developments, and expect the pace of economic growth in the euro area to slow.

## Exchange rate of the euro and purchasing power parity



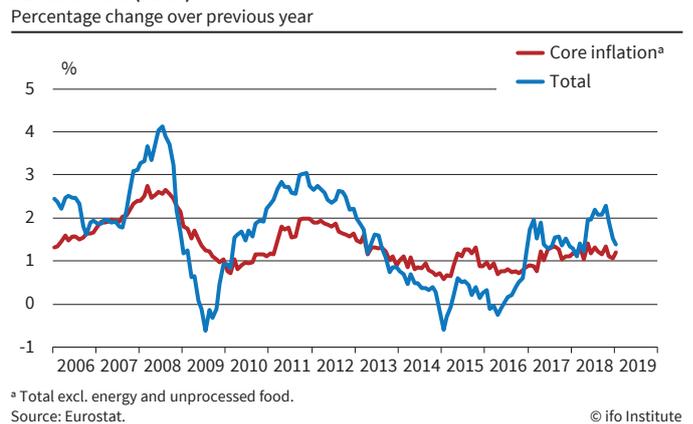
The exchange rate of the euro against the US dollar averaged approximately 1.14 \$/€ between December 2018 and February 2019. (In November 2018 the rate had also amounted to around 1.14 \$/€.)

## Unemployment rate



Euro area (EA19) unemployment (seasonally adjusted) amounted to 7.8% in January 2019, stable compared to December 2018. EU28 unemployment rate was 6.5% in January 2019, down from 6.6% in December 2018. In January 2019 the lowest unemployment rate was recorded in the Czech Republic (2.1%) and Germany (3.2%), while the rate was highest in Greece (18.5%), Spain (14.1%) and Italy (10.5%).

## Inflation rate (HICP)



Euro area annual inflation (HICP) was 1.5% in February 2019, up from 1.4% in January 2019. Year-on-year EA19 core inflation (excluding energy and unprocessed foods) amounted to 1.2% in January 2019, again up from 1.1% in December 2018.