European Round Table
for Industry

# European Competitiveness and Industry

Benchmarking **Report 2019**

# Overview

## Economic performance and competitiveness



## Innovation



## Jobs & Skills



## Digital Transformation



## Energy Transition & Climate Change



## Trade & Investment

# Foreword

As we prepare to enter a new decade, the European economy is facing difficult times. The global economic environment is becoming weaker. World trade growth is diminishing and economic ripples from trade and geopolitical conflicts are increasingly evident.

Open and export-oriented European economies are suffering from weaker demand for investment goods and durable consumer goods such as cars. Homegrown problems are adding to this, most notably the uncertainty on the timing and final conditions of the British exit from the European Union.

But aside from the recent signs of a cyclical downturn and intensifying political interferences, many indicators of this new ERT Benchmarking Report illustrate that Europe's competitiveness is under threat. Unit labour costs are rising in major European economies as wage growth exceeds productivity growth. Global export market shares of European manufacturers are in decline in the long-term. Improvement and extension of Europe's digital and telecom infrastructure lag significantly behind international competitors.

While Europe remains a global center of research and development it has already fallen behind its peers – such as China, the US, Japan and South Korea – in terms of R&D expenditures relative to GDP. On top of that, the comparatively small global share of European unicorns points to barriers for scaling innovative businesses in the EU.

However, a changing market environment is also providing new opportunities for Europe. Climate protection and sustainability are rapidly gaining importance on the political and societal agenda. Europe has committed itself to ambitious targets for the reduction of $CO_2$ emissions, an increase of energy efficiency and a higher share of renewable energy. Regarding these ambitions, Europe is already a global leader. Now Europe must prove that sustainability and economic growth are not opposites, but two sides of the same coin.

To reconcile both targets, a conducive environment for innovation and development of new technologies is extremely important. Many aspects are relevant here: a smart regulatory framework, e.g., applying the 'innovation principle' across all policy areas as a complement to the precautionary principle, as well as leveraging regulatory sandboxes to detect the best regulatory approaches. We need an open and science-based dialogue on the opportunities and risks of new technologies, as well as tax incentives for basic research and development. Finally, the availability of risk capital is crucial if new ideas are to truly gain the lift they need to make it to the market place.

So, there's quite a lot to be done and the decade ahead of us demands real progress, if Europe is to strengthen its place in the world. While pursuing the transition of the European economy and energy sectors towards circular and sustainable business models, the international competitiveness of the European industry must be improved. Among other factors, sufficient and cost-competitive supply of clean energy and raw materials is needed to keep long industrial value chains as a center of innovation and as a backbone for long term economic growth in Europe.

This report presents a comprehensive overview of key indicators and compares European economies with their international partners in the areas of macroeconomics, competitiveness, trade/investment, innovation/science, digital economy, energy/climate and employment/skills.

**We are confident that you will find it useful.**

**Dr Martin Brudermüller**

Chairman of ERT's Competitiveness & Innovation Committee
Chairman of the Board of Executive Directors of BASF

# Executive Summary

Key statistics of the ERT Benchmarking Report:

The ERT Position Paper on the future strategy for European industry ("Turning Global Challenges into Opportunities – a chance for Europe to lead") contains a broader analysis of the challenges which Europe industry is facing and an extensive list of recommendations for EU policy makers.

European shares in world manufacturing value-added and in export markets **decreased by 4%** and 5% respectively between 2006 and 2016



Industrial **electricity prices in Europe are considerably higher** than in other regions, driven mainly by non-energy costs: for 2017 in €/MWh: 103.3 in EU vs. 61.3 in US and 74.3 in Canada

Expected **growth rates** in Europe are **significantly below** the world average

**2.0%**

EU **R&D spending intensity is falling behind** (2017): 2.0% in EU vs. 2.1% in China, 2.8% in the US and 2.4% is the OECD average

**23%**

The share of **European companies in the Fortune 500** has declined **from 32% in 2010 to 23%** in 2019

**75%**

**Unit labour costs** in the EU have **decreased slightly**, but not as significantly as in the US. Overall economic productivity in the EU is only 75% of US productivity

# Executive Summary

## Competitiveness

### Observations

Industry continues to play a pivotal role in the EU economy as a major employer, supporting high value jobs, also indirectly. Europe's longer-term growth outlook remains tepid and uncertain. European manufacturing is continuing to lose global market share.

In the EU, labour unit costs have fallen slightly over the past 15 years, but much less than in the US, South Korea and Mexico. Europe is a region with high debt levels. After the sharp drop in investment since the financial crisis, private investment has begun to recover, while public investment remains subdued.

### Recommendations

Strengthening the Single Market and support for new technologies should be key priorities in Europe. The EU must also nurture a context in which European companies can scale up. This should include a modernisation of competition policy that takes into account global market conditions and dynamics as well as the protection of consumer interests in the long-term.

All European countries must increase their productivity. This requires higher investment in skills and efficient labour markets.

Sustainable private and public debt levels are necessary to maintain macroeconomic stability.

At the same time, both the private and the public sectors have a role to play in strategic investments, which focus on productivity enhancing future technologies and critical infrastructure.

## Innovation

### Observations

R&D investment relative to EU GDP has flatlined significantly below the OECD average and lags major competitors, such as the US, South Korea and China.

The number of patent applications in the EU is lower than in the US and China in the ICT sector, and lower than in the US and Japan in the biotech sector. Europe performs worse than the US and China in terms of the share of unicorns.

European venture capital deals and capital invested fell back in 2018.

### Recommendations

The EU needs an innovation-friendly fiscal environment and the new budget for Horizon Europe should be at least €120 billion. A smart regulatory framework should enable industry to drive innovation, including through R&D tax incentives for companies. The innovation principle should be operationalised to achieve risk-proportionate, predictable and science-based technologies.

The EU should also stimulate interdisciplinary Public Private Partnerships and focussed missions. Better access to finance is also needed, in particular venture capital, by further developing the Capital Markets Union.

# Executive Summary

## Jobs & Skills

### Observations

The proportion of young people not in employment, education or training has fallen, but remains extremely high in those member states that suffer the most from protracted economic problems. At the same time, there is a high demand for digital skills across sectors and many firms are finding it hard to recruit sufficient ICT specialists, not only in the ICT sector itself.

The EU and its Member States are leading in the implementation of the UN SDGs. Household income inequality in the EU is lower than in the US but has overall not fallen since the financial crisis. In comparison to the rest of the world, companies in Western Europe have more women in board rooms.

### Recommendations

Europe cannot afford wasting talent and more efforts are needed to close the skills gap. Especially young people should get all opportunities to acquire skills and succeed in labour markets. More investment in digital skills, including ICT, is required.

In an economy where the pace of innovation and disruption to jobs is high, Europe must continue taking the lead in promoting inclusive and sustainable growth to the benefit of all. This is fully aligned with Europe's values and supported by European global companies represented by ERT. ERT Member companies have pledged to create an inclusive business culture with equal opportunities for all and share good practice to achieve this goal.

## Digital Transformation

### Observations

The US and China are ahead of Europe in the areas of artificial Intelligence (AI), telecom investment, 5G roll-out and the platform economy. Telecoms service revenues have fallen and are stagnating in Europe - and the gap to the US remains high. European operators are investing significantly less per capita than operators in the US and Japan.

The EU risks falling behind other major economies in providing 5G infrastructure and allowing the full potential of its commercialisation. In developing platform companies, the EU already lags behind other regions, especially for business-to-customer (B2C) platforms.

Trust of Europeans in the tech sector is weak compared to the EU's main competitor.

### Recommendations

The EU should assume leadership in industrial AI-technologies. Furthermore, the telecoms infrastructure needs more investment in Europe if the increasing demand for services is to be satisfied. Also, a harmonised framework for 5G spectrum, assignment and operation is decisive for early availability at pan-European scale. This should avoid fragmentation and enable 5G for B2B applications. Spectrum assignment procedures must prioritise investment in coverage and capacity over upfront fees. Finally, the EU should promote the free flow of machine data standards globally.

Policymakers, public research institutions and businesses must work together to ensure the necessary confidence in new technologies as well as a sense of urgency and investment to catch up. Europe cannot afford to fall behind in their development if it wants to ensure its industrial competitiveness

# Executive Summary

## Energy Transition & Climate Change

### Observations

The European economy is substantially less energy-intensive and less CO2-intensive than the Chinese, Russian or American economies. The European share of global CO2 emissions has fallen to just 10%. By international standards, it is mainly taxes and levies which now in the EU account on average for 38% of the electricity price and contribute to sustaining prices at high levels.

Europe remains a global leader in renewable energy investment, but China is now the world's biggest investor. The composition of final energy consumption has shifted towards cleaner electricity and biofuels in the EU. China is also moving to electricity but remains heavily dependent on coal.

### Recommendations

The EU should continue to support the pricing of carbon outside Europe (at least at G20 level) to create a level playing field and enable low carbon technologies for industry to be competitive.

Energy and industrial policies must be closely aligned to boost competitiveness. EU industrial policy should facilitate the transition of EU industry by creating an investment-friendly environment. The EU should ensure sufficient and competitive clean energy supply while enabling future energy markets to cope with this trend.

## Trade & Investment

### Observations

European companies increasingly face barriers to trade and investment in a wide range of economies due to spiralling protectionism seen in recent years.

The EU's two biggest trade relationships are with the US and China. There is a strong mutual dependence among manufacturers on both sides of the Atlantic, as the US remains the single most important trade and investment partner for the EU. Chinese producers are increasingly competitive on international markets, and China is the largest source of imports for a significant number of countries worldwide. Although the Chinese outward foreign direct investment (FDI) in the EU has risen, and China is taking advantage of the EU's openness, foreign investors continue to face many restrictions in China.

The EU remains the single most important region for both outward and inward FDI, but its relative share has declined in recent years. Foreign investors from outside the EU have created eight million jobs in the Union.

### Recommendations

It is essential that the EU works with all other major economies to reverse the trend towards protectionism and to open each other's markets. The EU should ensure free, fair and rules-based global trade, and in particular strive to address the challenge of the WTO dispute settlement system. The EU furthermore needs an active trade policy to strengthen the level playing field for European companies while European Economic Diplomacy should pro-actively promote the EU's industrial interests.

The EU should work together with the US to further strengthen the trade and investment relationship and accelerate the negotiation of an investment agreement with China. The EU and Member States need to implement effective national FDI screening mechanisms. Distortions of a level playing field should also be tackled through effective use of the EU's modernised Trade Defence Instruments and adoption of an International Procurement Instrument based on reciprocity.

The EU needs to remain competitive as a destination – and a source – for FDI. Bilateral investment treaties and/or strong investment chapters in future free trade agreements should thus be a priority.

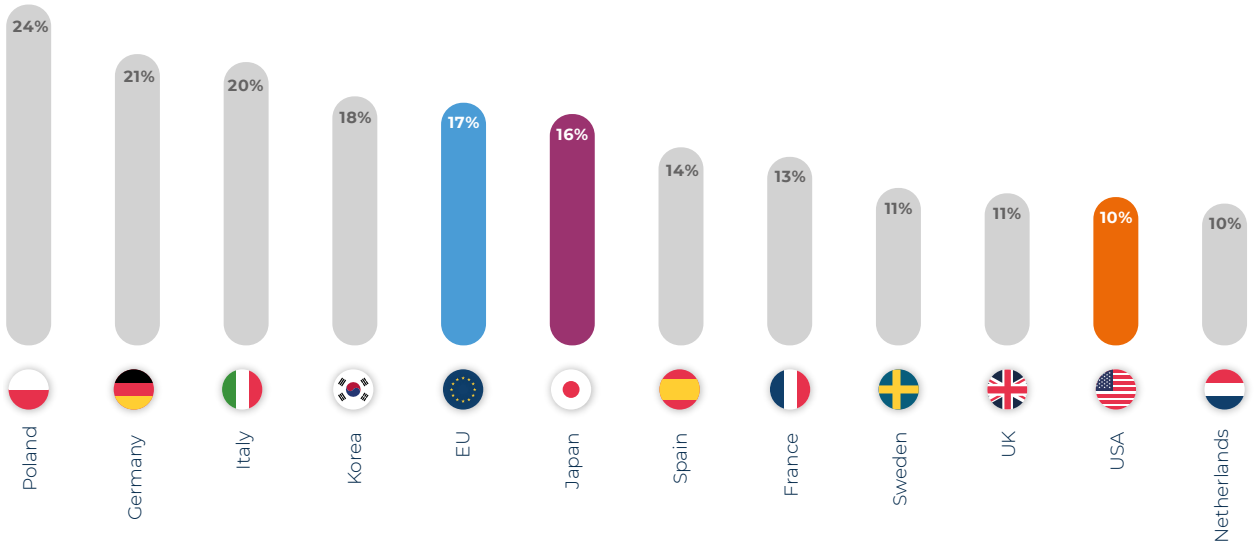
# Economic performance & competitiveness

# Industry remains the cornerstone of the EU economy

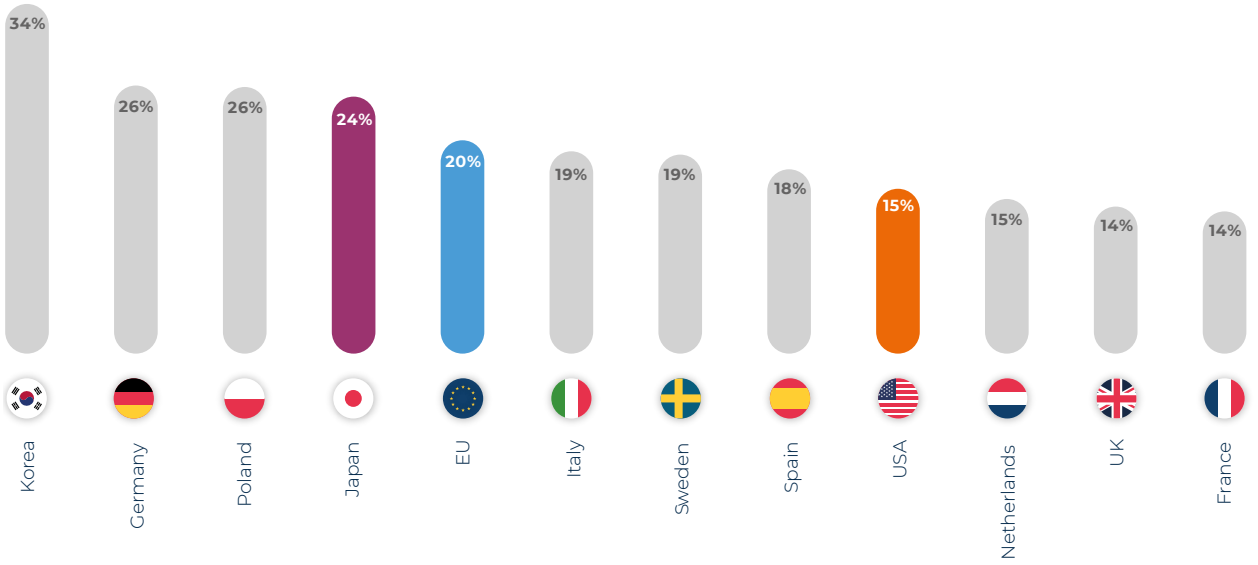
**Observation**
Industry continues to play a pivotal role in the EU economy as a major employer, supporting high value jobs. Industrial companies also indirectly support jobs and value added in other sectors.

**Recommendation**
Ensuring the competitiveness of EU industry while continuously promoting our social market economy should be a top priority for politicians and policymakers. The EU should incentivise industries' value creation for society beyond profit generation.

**Industry share of total employment in 2018**




**Industry share of total gross value added in 2018**




**Note:** Industry includes mining, manufacturing and utilities, but excludes construction

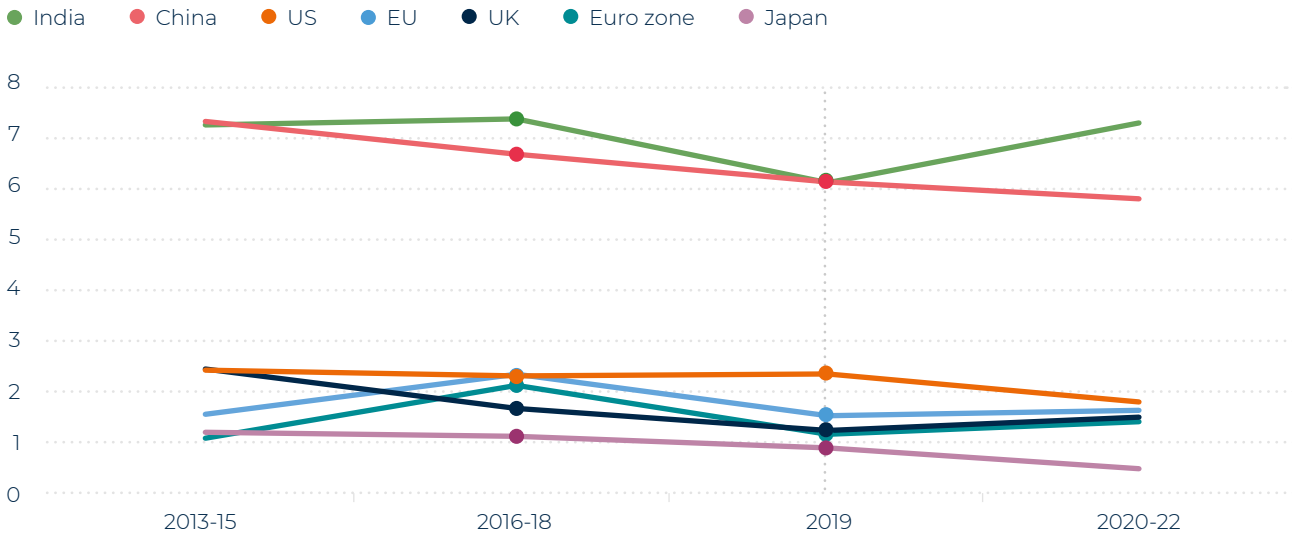
**Source:** OECD, Global Counsel calculations

# The growth outlook is uncertain

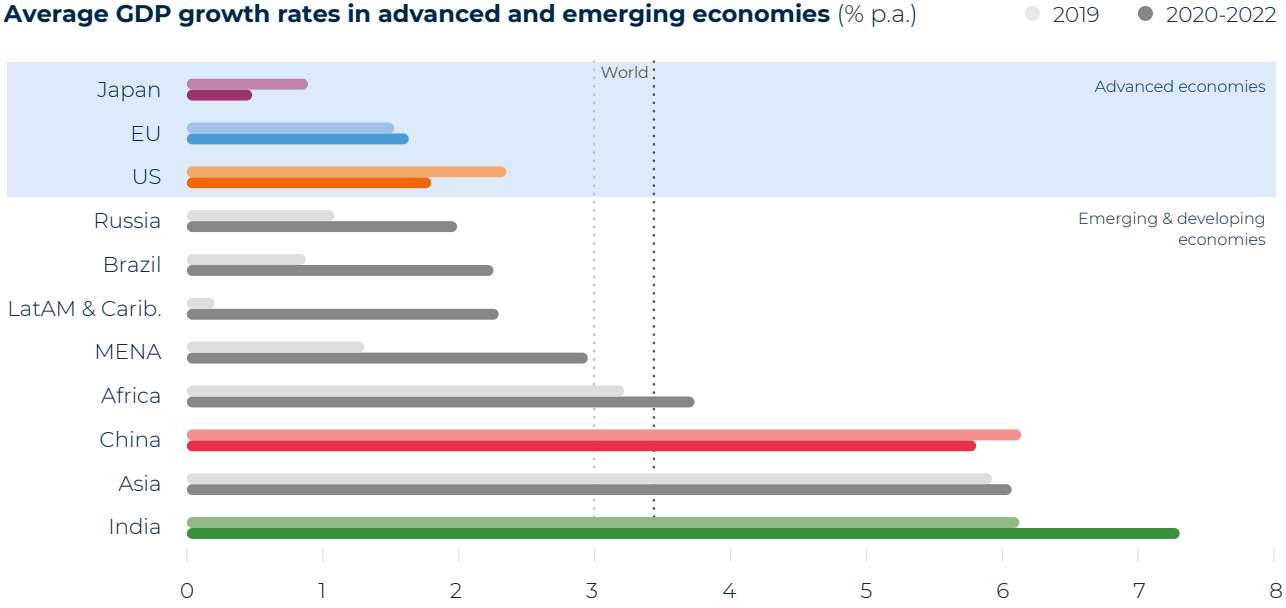
**Observation**
Europe's recovery has become more uneven and the longer-term growth outlook remains tepid and uncertain. At the same time, growth is expected to pick up in many emerging markets, even as growth slows in China, the US and Japan.

**Recommendation**
Europe needs to make sure that it reaches its full growth potential. This requires a conducive environment that allows business to grow. Strengthening the Single Market, support for new technologies and a smart regulatory framework should be key priorities.

**Average GDP growth rates of major economies** (% p.a.)




**Average GDP growth rates in advanced and emerging economies** (% p.a.)




Source: IMF

# The nature of global competition is changing

**Observation**

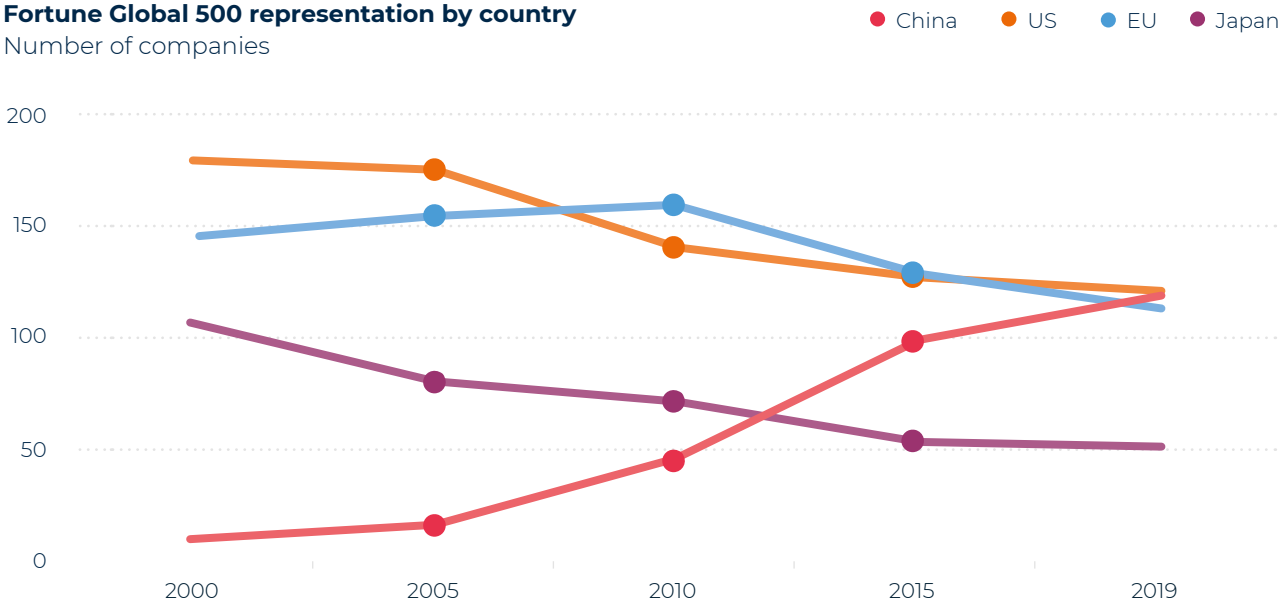
The global corporate landscape is changing rapidly and European firms risk losing out to their competitors, especially from China. The European Commission's European Political Strategy Centre recently noted the speed and force with which foreign firms, especially from China, are taking market share in previously European-dominated markets

**Recommendation**

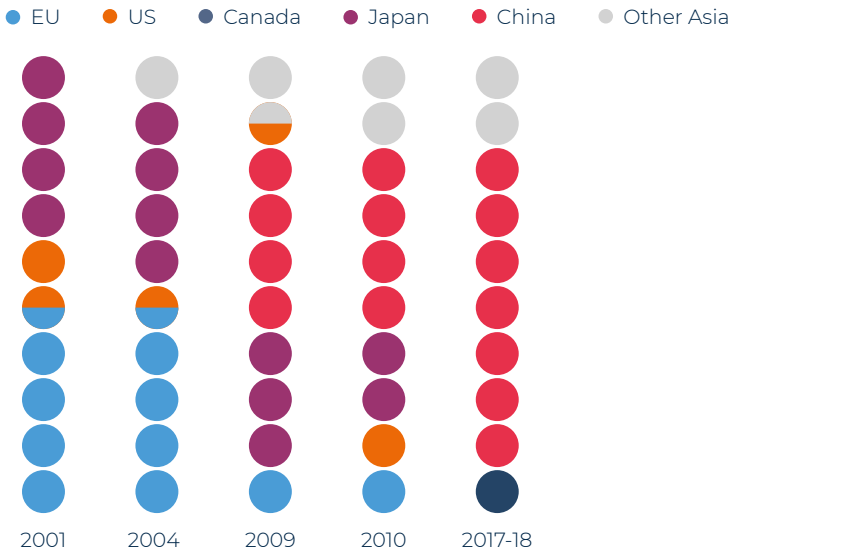
Europe must develop a more conducive environment for companies to grow. This should include a modernisation of competition policy that takes into account global market conditions and dynamics, as well as the protection of consumer interests.

**Fortune Global 500 representation by country**

Number of companies




**The ten largest manufacturers of solar panels/cells by country/region**




Fortune Global 500 representation by country
**Source:** Fortune

The ten largest manufacturers of solar panels
**Source:** European Political Strategy Centre 2019

# Manufacturing competitiveness is under pressure

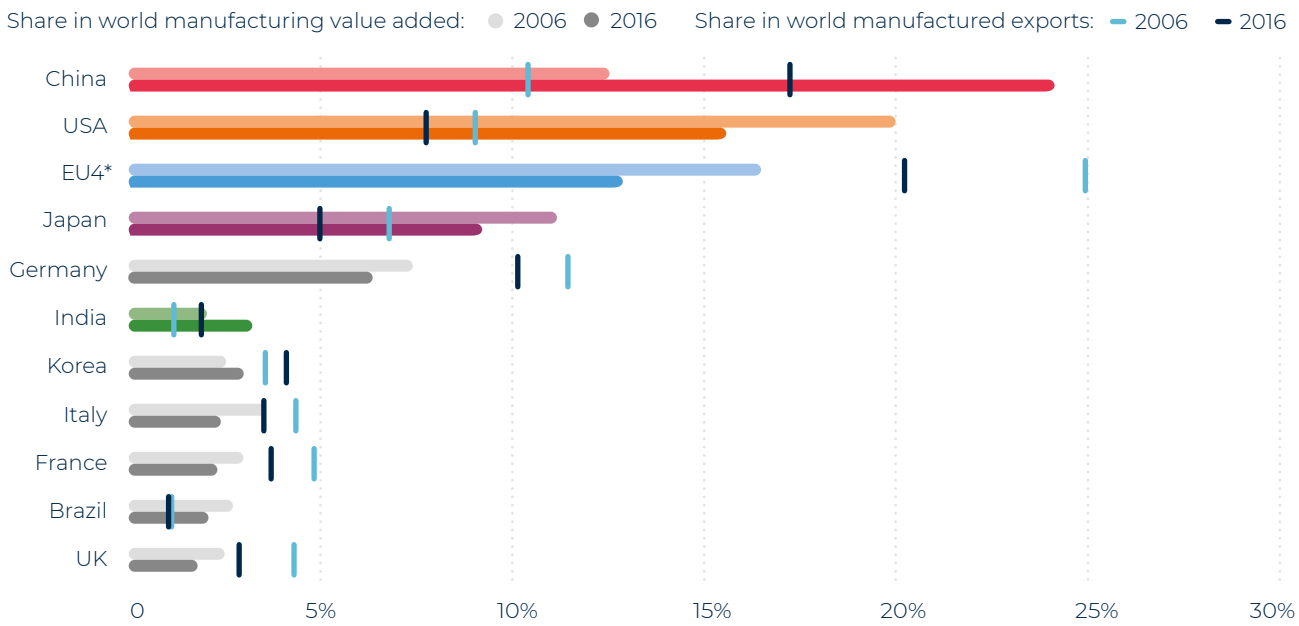
**Observation**

European manufacturing is continuing to lose global market share and export share due to strong growth of Chinese and other Asian producers. While the lost share of manufacturing value added is comparable to the US, the lost share of manufactured exports is much greater.

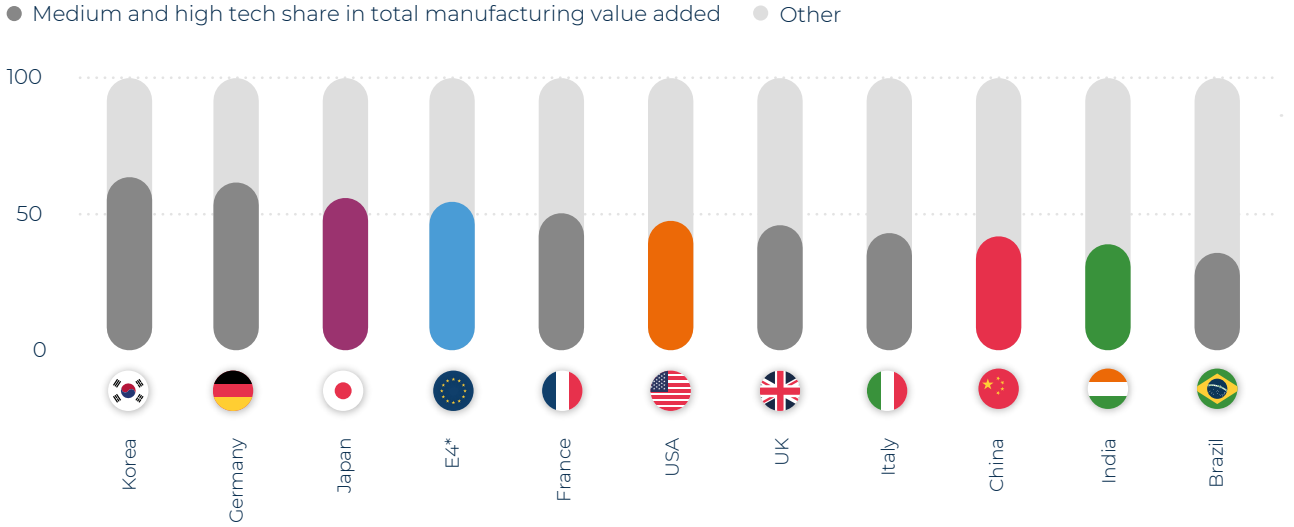
**Recommendation**

European manufacturing has many strengths, particularly in medium and high-tech sectors. But European governments and businesses must invest massively in the technological fields of the future, including artificial intelligence, circular economy and critical infrastructures, with a focus on industrial applications, to maintain Europe's industrial base.

**Manufacturing sector performance**




**Technological complexity of manufacturing**




Manufacturing sector performance
**Source:** UNIDO
**Note:** *EU4 = France, Germany, Italy and UK

Technological complexity of manufacturing
**Source:** UNIDO

# Labour productivity needs to rise

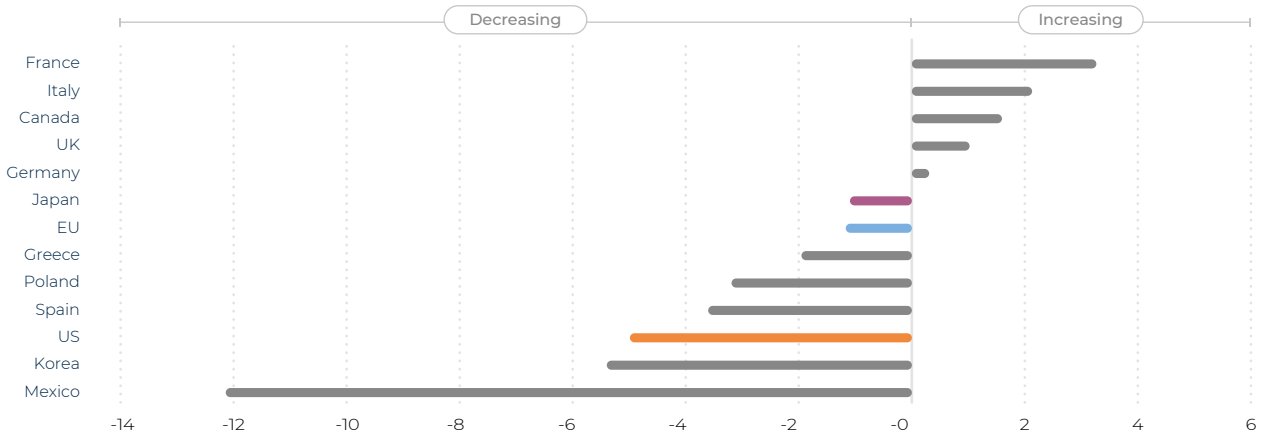
### Observation

Labour unit costs in France and Germany are increasing, while they are shrinking in Greece, Poland and Spain. In the EU as a whole, as well as in Japan, labour unit costs have fallen slightly since 2004, but much less than in the US, South Korea and Mexico.

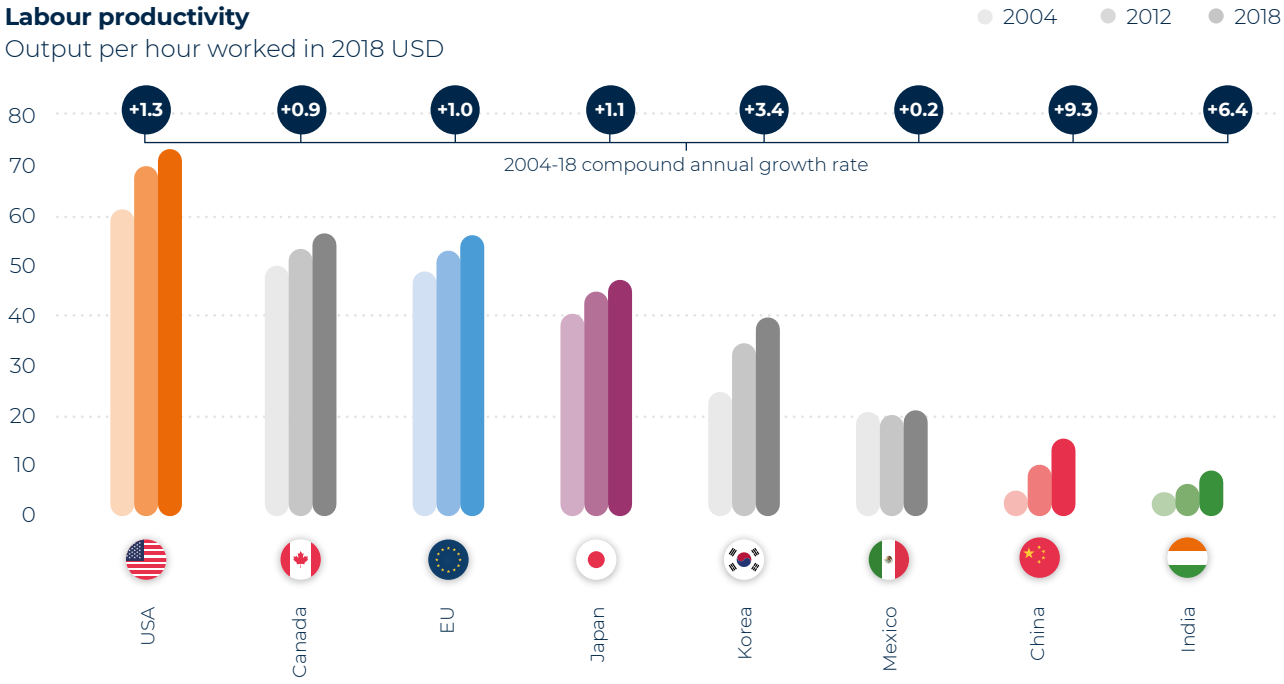
### Recommendation

All European countries must increase their productivity if European economies are to remain competitive. This requires higher investment in skills and capital as well as the design of efficient labour markets. Focus should be on employment security via lifelong learning rather than job security.

**Change in real unit labour cost**
%, 2004-18




**Labour productivity**
Output per hour worked in 2018 USD




**Change in real unit labour cost**
**Source:** Ameco

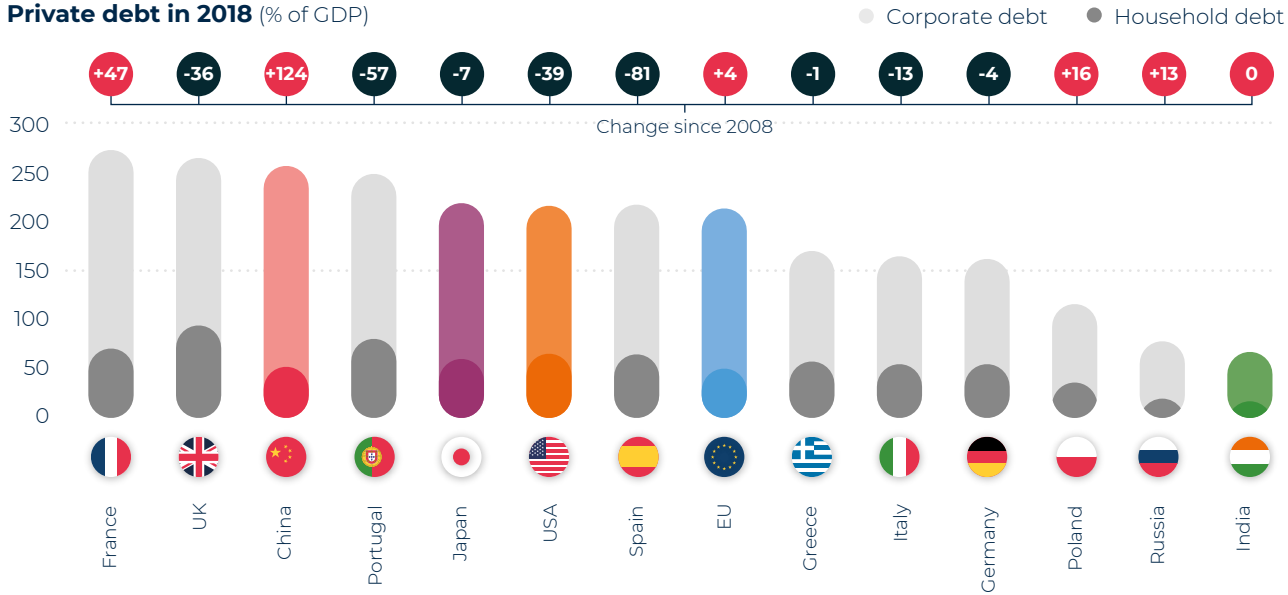
**Labour productivity**
**Source:** The Conference Board, Global Counsel calculations

# Debt levels remain high

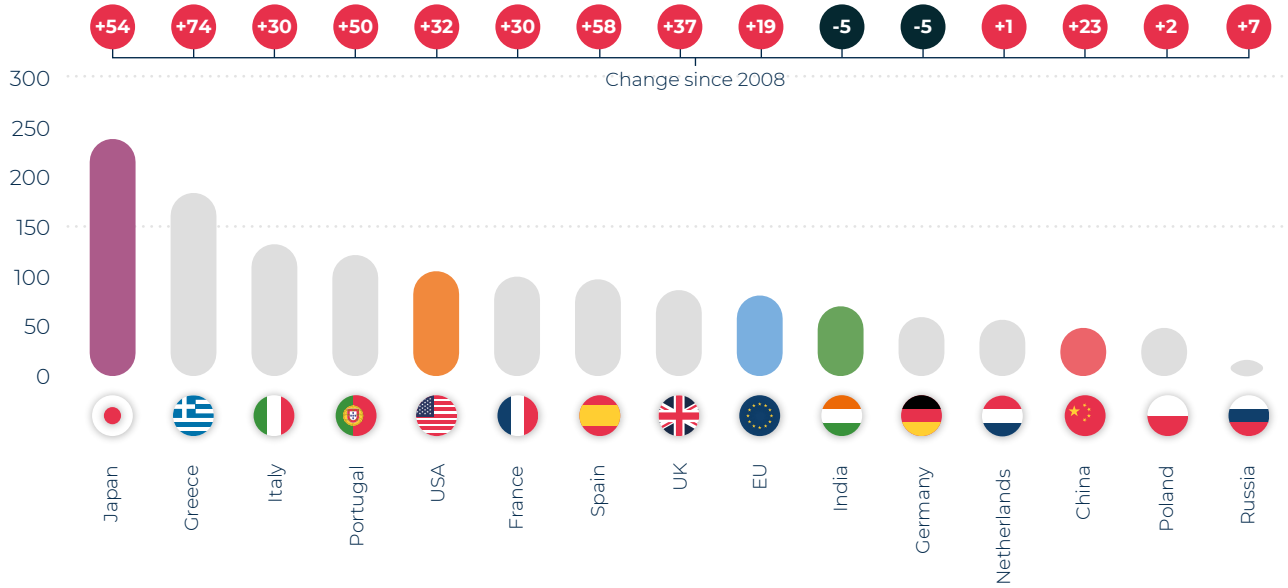
**Observation**
While household debt has fallen marginally in the EU as a whole and significantly in the countries hit by the real estate crisis and connected to the global financial crisis, corporate debt and public debt have edged up in many countries. This makes Europe a region with high debt levels, although the pace has been faster in some emerging markets in recent years, such as in China.

**Recommendation**
A sustained rise in confidence, consumer spending and investment requires that the finances of both households and companies are healthy. Sustainable private and public debt levels are also necessary to maintain macroeconomic stability, a key prerequisite for economic growth.

**Private debt in 2018** (% of GDP)




**Public debt in 2018** (% of GDP)




Private debt in 2018
**Note:** EU corporate debt levels are eurozone only
**Source:** CEIC, BIS

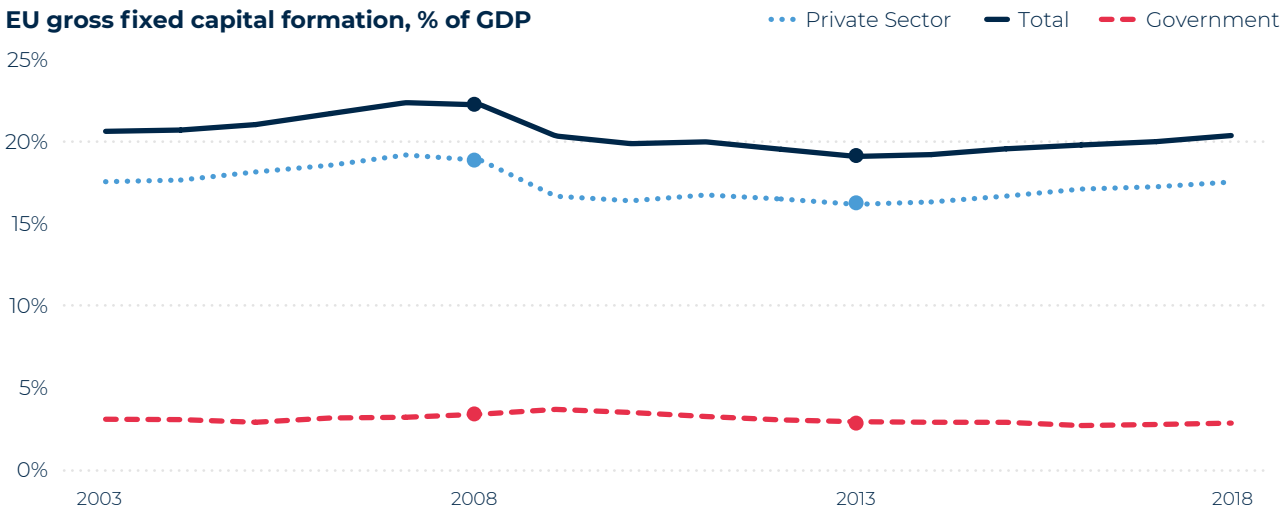
Public debt in 2018 – **Source:** IMF

# Low investment is constraining competitiveness

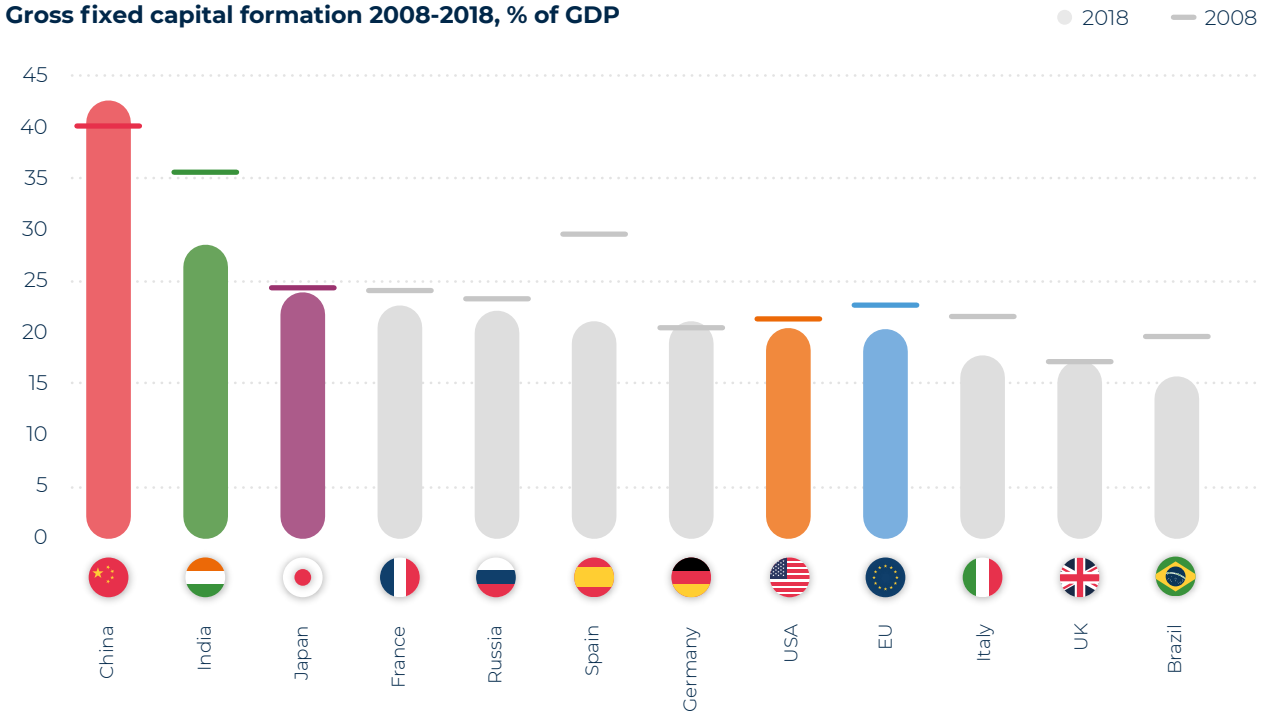
**Observation**
There has been a sharp drop in investment since the financial crisis, particularly among the countries worst affected by the debt crisis that followed. While private investment has begun to recover, public investment remains subdued.

**Recommendation**
In some countries investment rates were unsustainable before the crisis, but investment rates are now too low if Europe is to remain competitive. Both the private and the public sectors have a role to play in enabling this. The focus should be on technological fields of the future and critical infrastructure.

**EU gross fixed capital formation, % of GDP**




**Gross fixed capital formation 2008-2018, % of GDP**




**EU gross fixed capital formation, % of GDP**
**Source:** AMECO , Global Counsel calculations

**Gross fixed capital formation 2008-2018, % of GDP**
**Note:** Latest available data for the US, China and Japan is from 2017
**Source:** World Bank

# Innovation

# R&D spending needs to increase

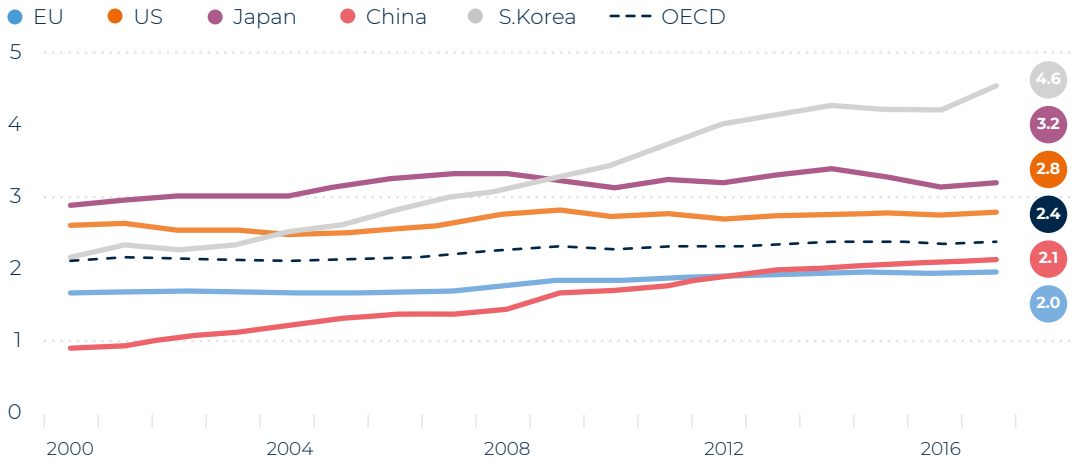
**Observation**

China is investing more in R&D as a share of GDP than the EU already since 2012. Investment in R&D in the EU has flatlined significantly below the OECD average and lags behind major competitors. The gap for business enterprise R&D is even higher than other sources of R&D.

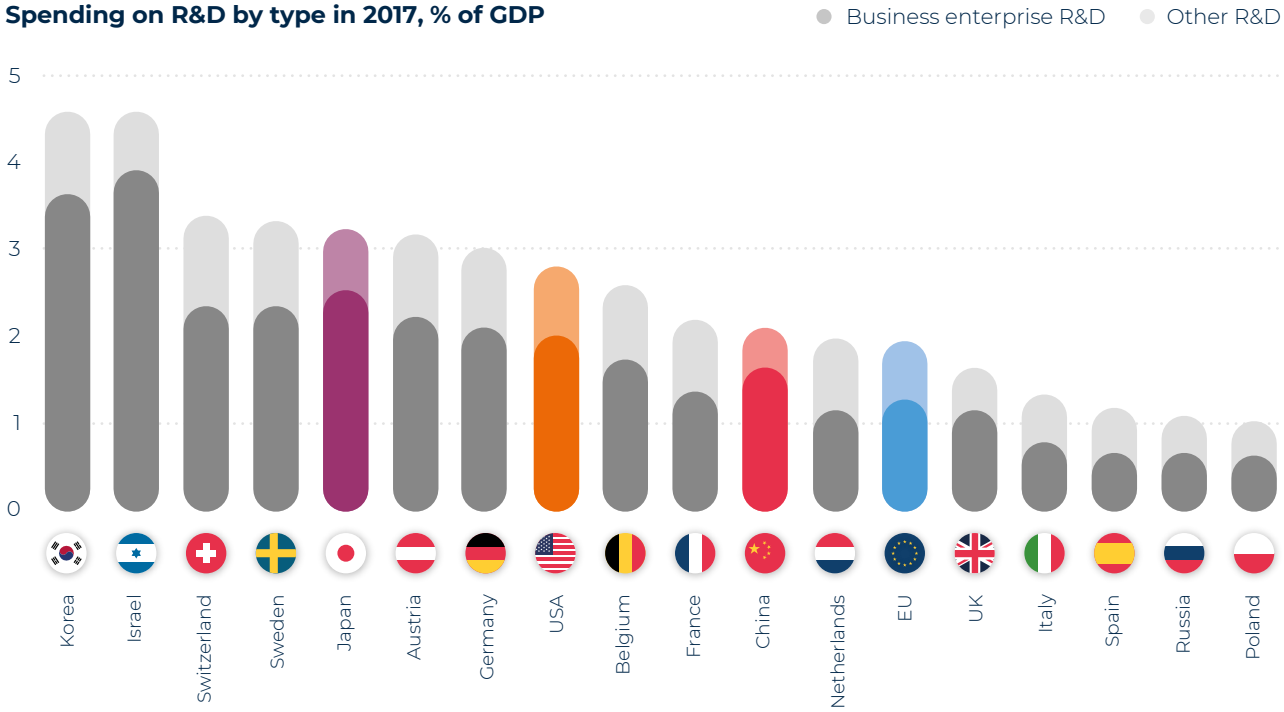
**Recommendation**

Investment in technology must be increased. The EU needs an innovation-friendly fiscal environment and the new budget for the Horizon Europe programme should be at least €120 billion and fully utilised in the implementation. A smart regulatory framework should enable industry to drive innovation, including through R&D tax incentives for companies. The innovation principle should be operationalised to achieve risk-proportionate, predictable and science-based technologies.

**Gross domestic spending on R&D, % of GDP**




**Spending on R&D by type in 2017, % of GDP**




**Note:** Business enterprise R&D includes activities conducted by private and public enterprises. Other R&D includes activities from government, higher education and private non-profit organisations.

**Source:** OECD

# The circular economy offers great potential

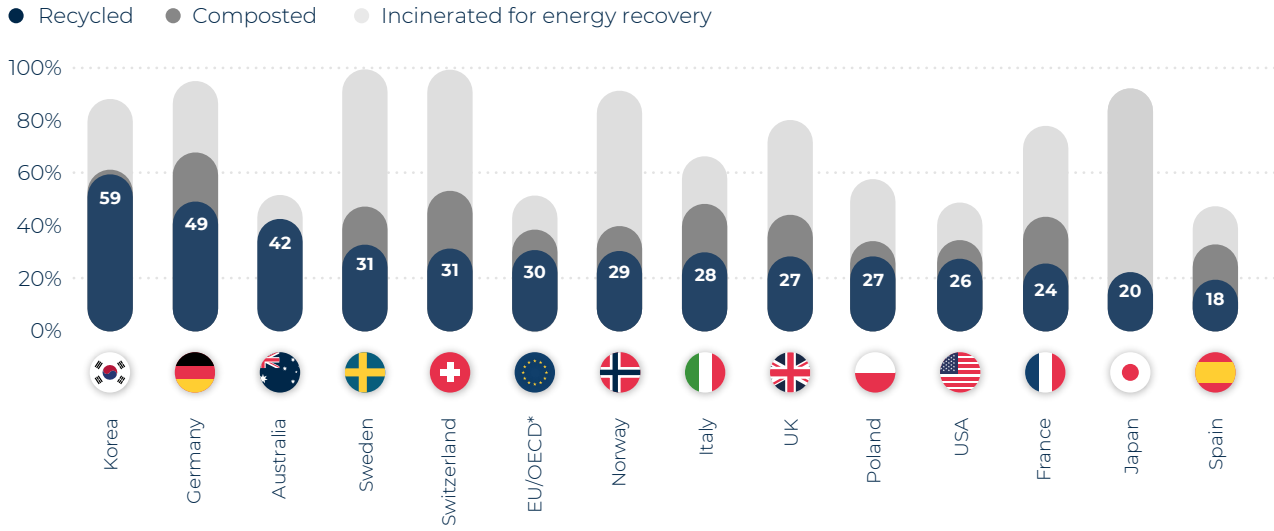
**Observation**

The circular economy is already creating jobs, investment and value added. Almost two in every 60 jobs in the EU are now related to the circular economy. But available data shows that not even a third of municipal waste is being recycled in the EU, despite some Member States performing well in international comparison.

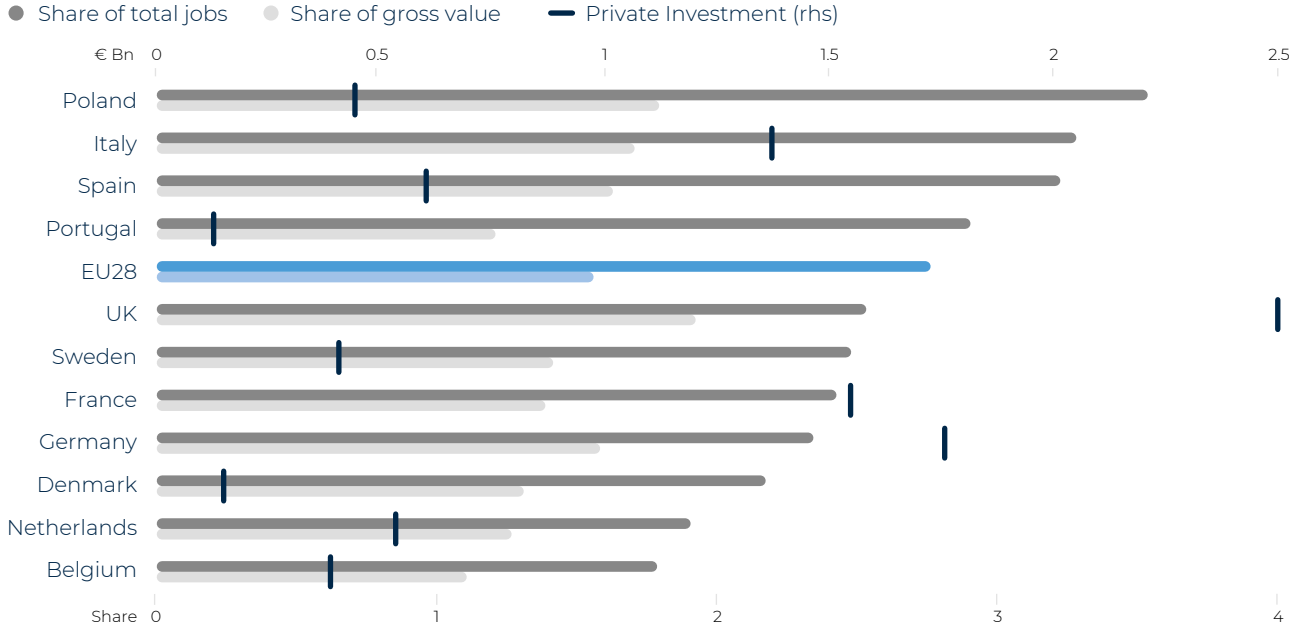
**Recommendation**

The EU should create a common market for Waste as a Resource by harmonising End of Waste rules and it should acknowledge chemical recycling as a supplement to other types of plastic recycling. The EU should also encourage innovative solutions and new circular business models.

**Treatment of municipal waste as a % of total waste generated in 2017** (%)




**Size of the EU's circular economy in 2016** (Share / € Billion)



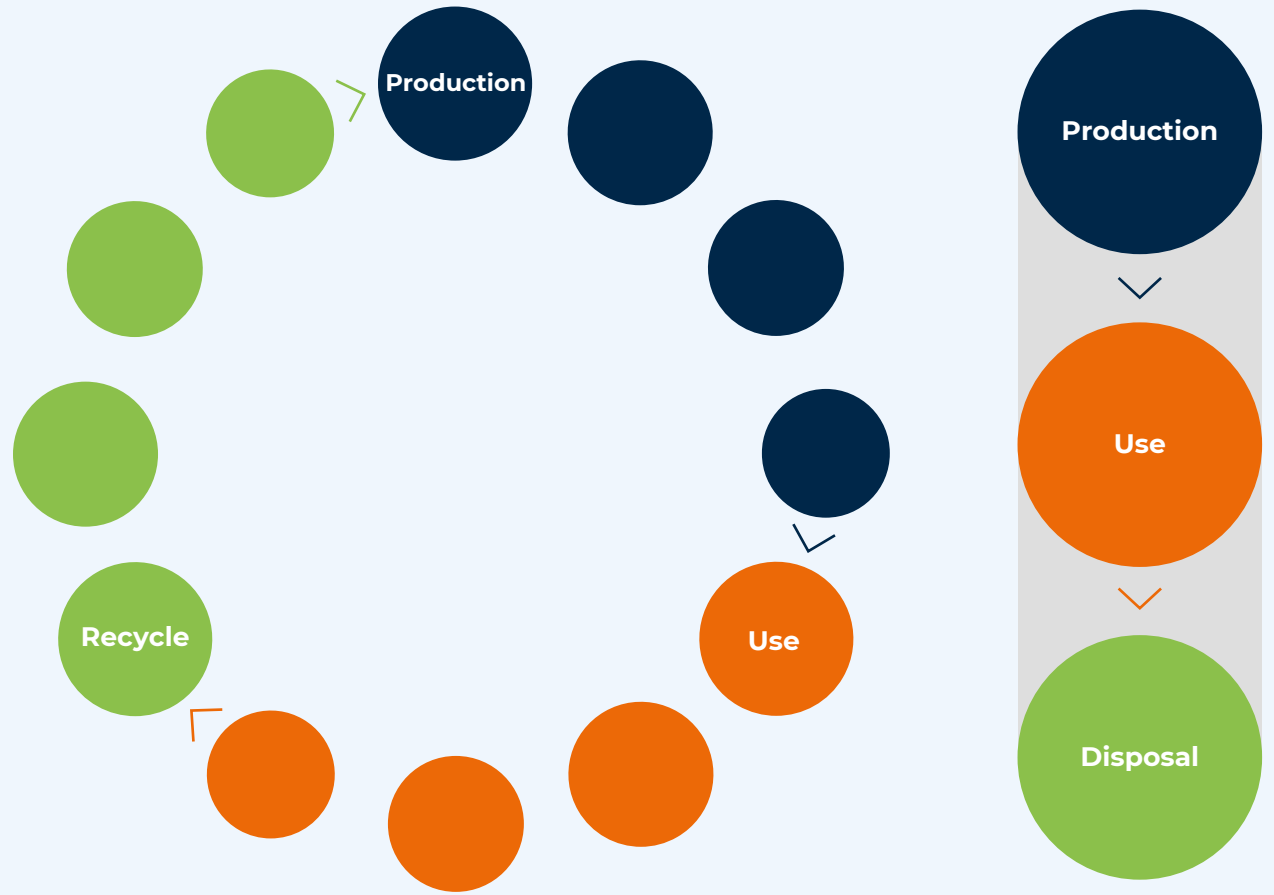

Treatment of municipal waste as a % of total waste generated in 2017
**Source:** OECD , Global Counsel calculations
**Note:** *EU & OECD countries, excluding Ireland. Total EU28 investment was €175bn in 2016

Size of the EU's circular economy in 2016
**Source:** Eurostat

# What is the Circular economy?

A circular economy aims to maintain the value of products, materials and resources for as long as possible by returning them into the product cycle at the end of their use, while minimising the generation of waste. The fewer products we discard, the less materials we extract, the better for our environment.

This process starts at the very beginning of a product's lifecycle: smart product design and production processes can help save resources, avoid inefficient waste management and create new business opportunities.




**Source:** Eurostat

# The EU must better leverage its position in science

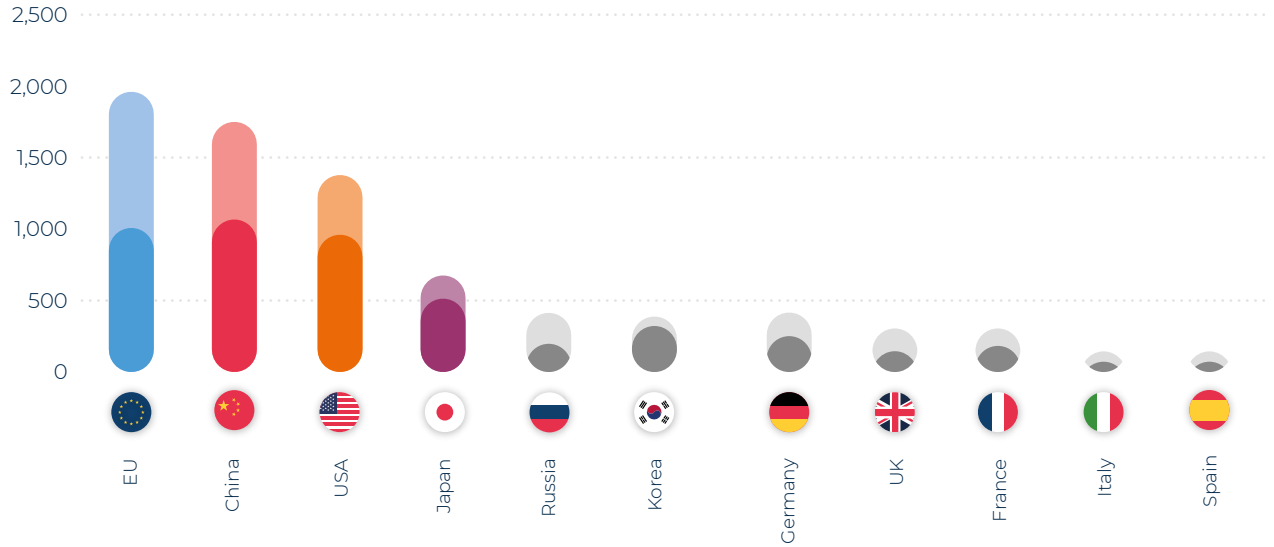
**Observation**

Europe is a leading global centre for scientific research, employing almost 2m scientific researchers. However, China has more business enterprise researchers. The number of patent applications in the EU is lower than in the US and China in the ICT sector, and lower than in the US and Japan in the biotech sector.

**Recommendation**

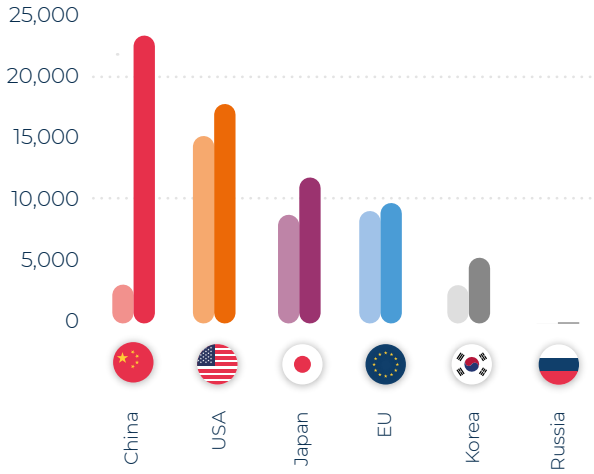
Scientific research in universities, research foundations, public bodies and by the private sector is essential if the European industry is to remain competitive. The EU should provide the Horizon Europe programme with a strong mandate for scientific excellence, interdisciplinary Public Private Partnerships (PPPs) and focussed missions.

**Number of scientific researchers, 2017** (in thousands) ● Business enterprise researchers ● Other researchers

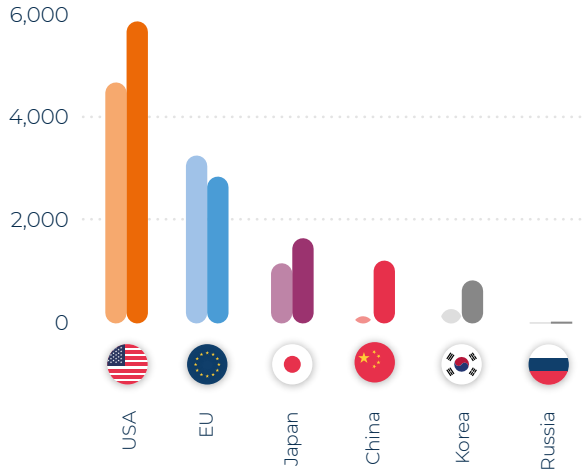



**Number of patent applications under the Patent Cooperation Treaty in 2017** ● 2006 ● 2017

**ICT Sector**




**Biotechnology Sector**




Number of scientific researchers, 2017
**Note:** US data is from 2016
**Source:** OECD

Number of patent applications under the Patent Cooperation Treaty in 2017
**Note:** The data on patent applications can be considered as a proxy for the output of R&D in the form of inventions.
**Source:** OECD

# Europe needs more venture capital

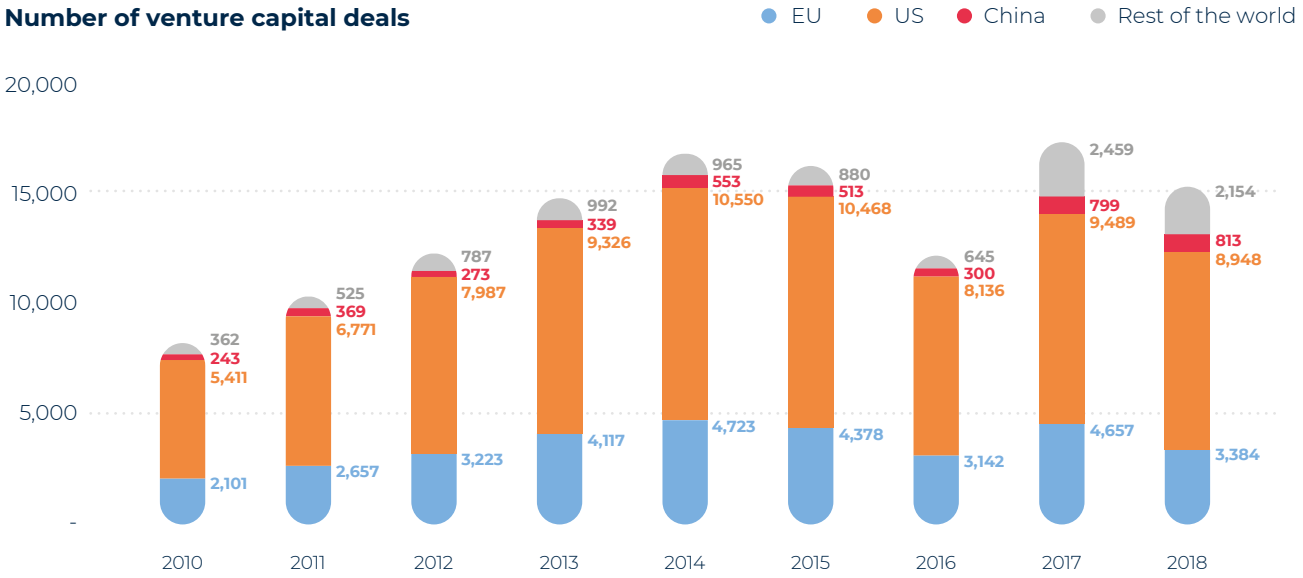
**Observation**

European venture capital deals and capital invested fell back in 2016, with the European share of the global total continuing to decline. While the US dominates the global market, Asia has emerged as a major centre for high-value investment.

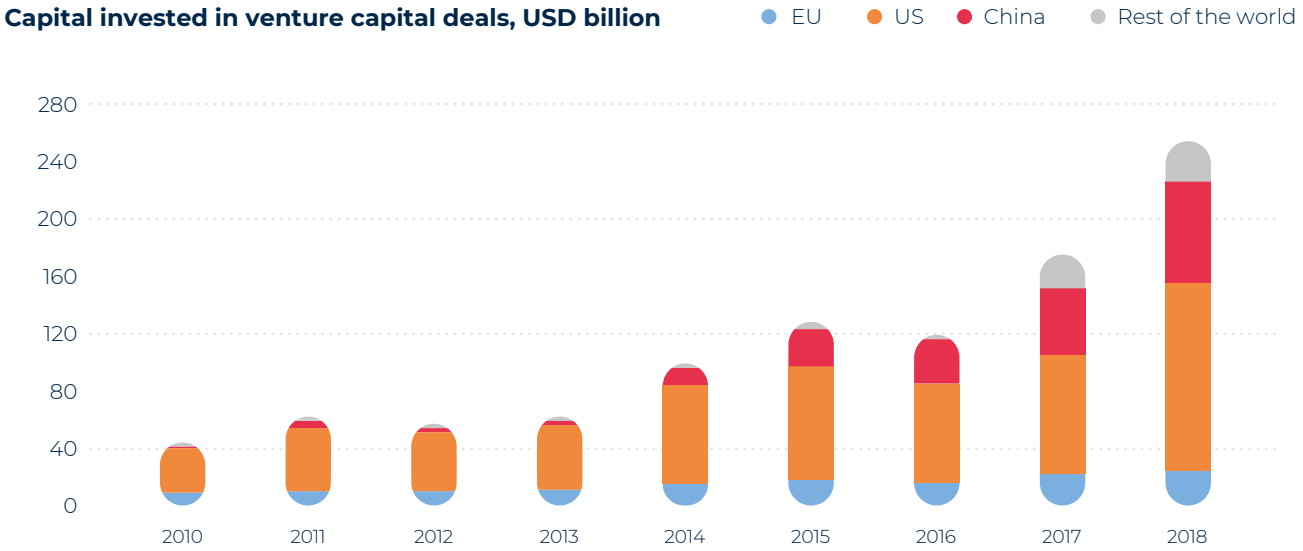
**Recommendation**

The EU should improve access to finance by developing the Capital Markets Union. Venture capital financing is important for a vibrant, innovative economy, both because it allows the most innovative businesses (in particular deep-tech start-ups) to get access to capital and because of the experience that investors bring to those businesses.

**Number of venture capital deals**




**Capital invested in venture capital deals, USD billion**




Source: KPMG

# European start-ups are being left behind

**Observation**

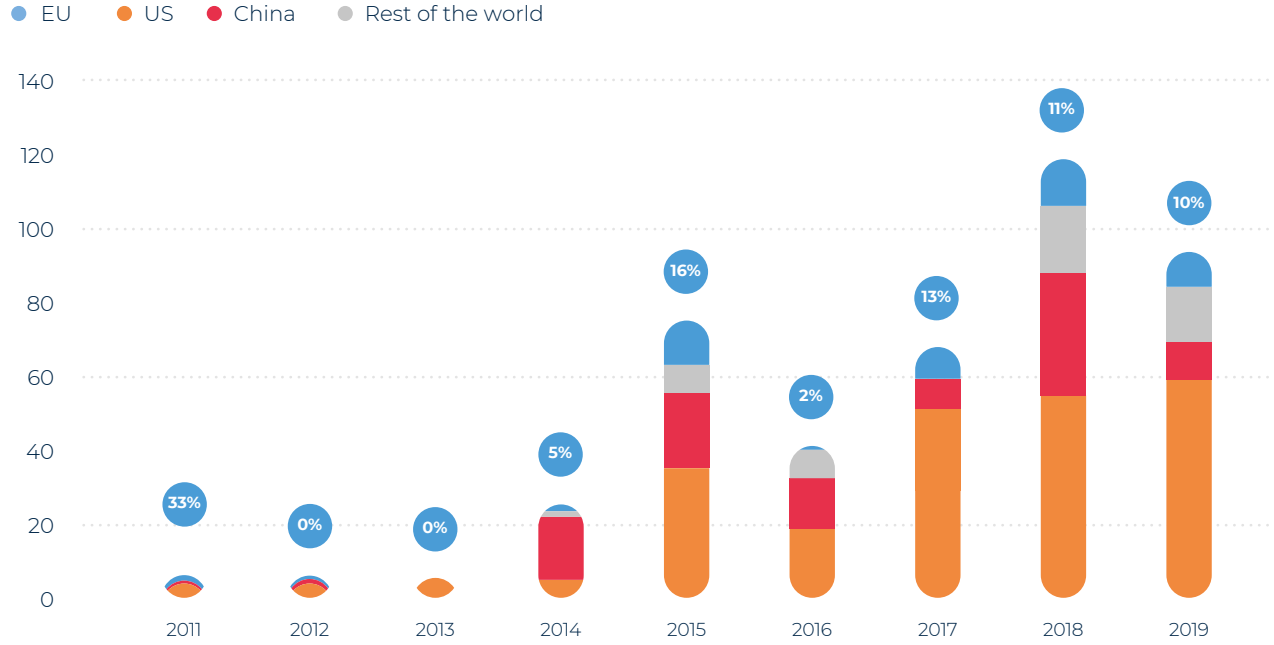
The European share of unicorns, either by number or value, is very low, and far short of what should be expected of the European economy, if it is to remain competitive with China and the US.

**Recommendation**

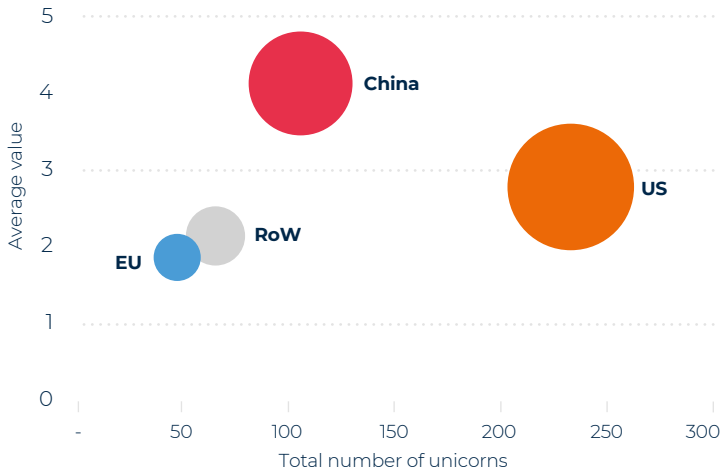
The Digital Single Market should shape an environment in which European tech start-ups can grow to compete at scale and in sufficient number with other major economies.

The EU should facilitate access to finance in a way that takes into account the longer development cycles of disruptive technologies.

**The number of unicorns created by year and by country/region** (Circle refers to EU share)




**Total unicorns and their valuations by country/region**




**Note:** Bubble size indicates total value.
**Source:** CB Insights

# Jobs & Skills

# European economies are ageing fast

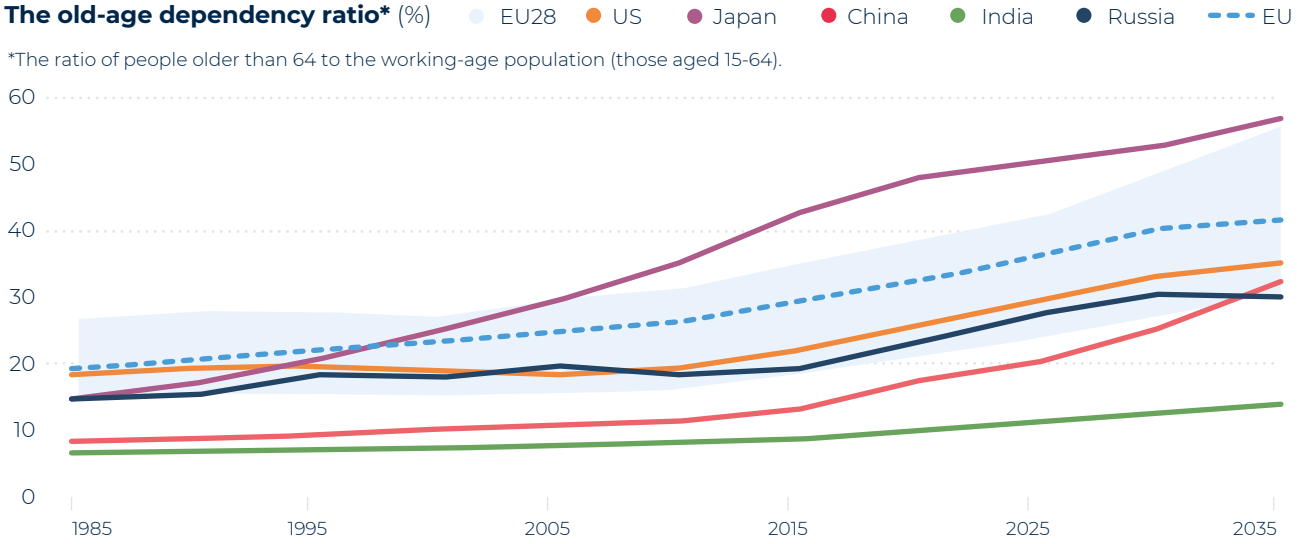
**Observation**

The old-age dependency ratio is set to remain higher than in many other large economies. The size of the problem varies significantly across member states, with some of the worst affected also having high public debt.

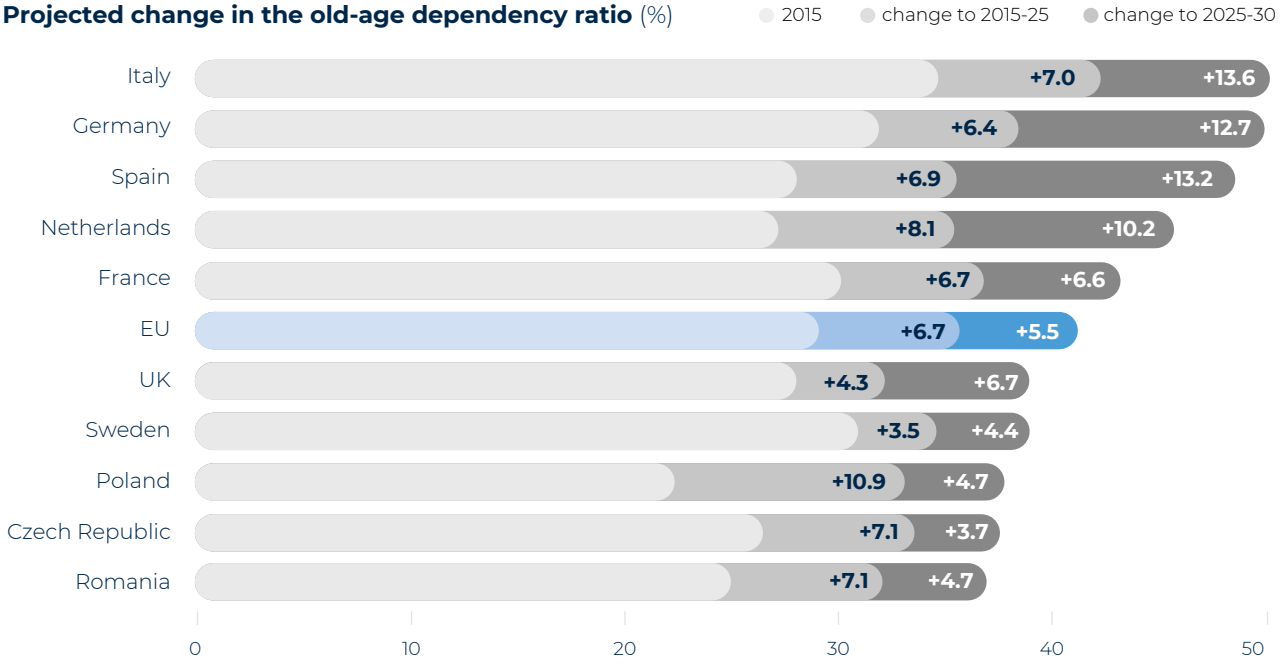
**Recommendation**

A combination of migration, productivity improvement, reskilling, lifelong learning and social security reform is required to address the challenge presented by an aging population. Many policy changes have long lead times before they have impact.

**The old-age dependency ratio*** (%)




**Projected change in the old-age dependency ratio** (%)



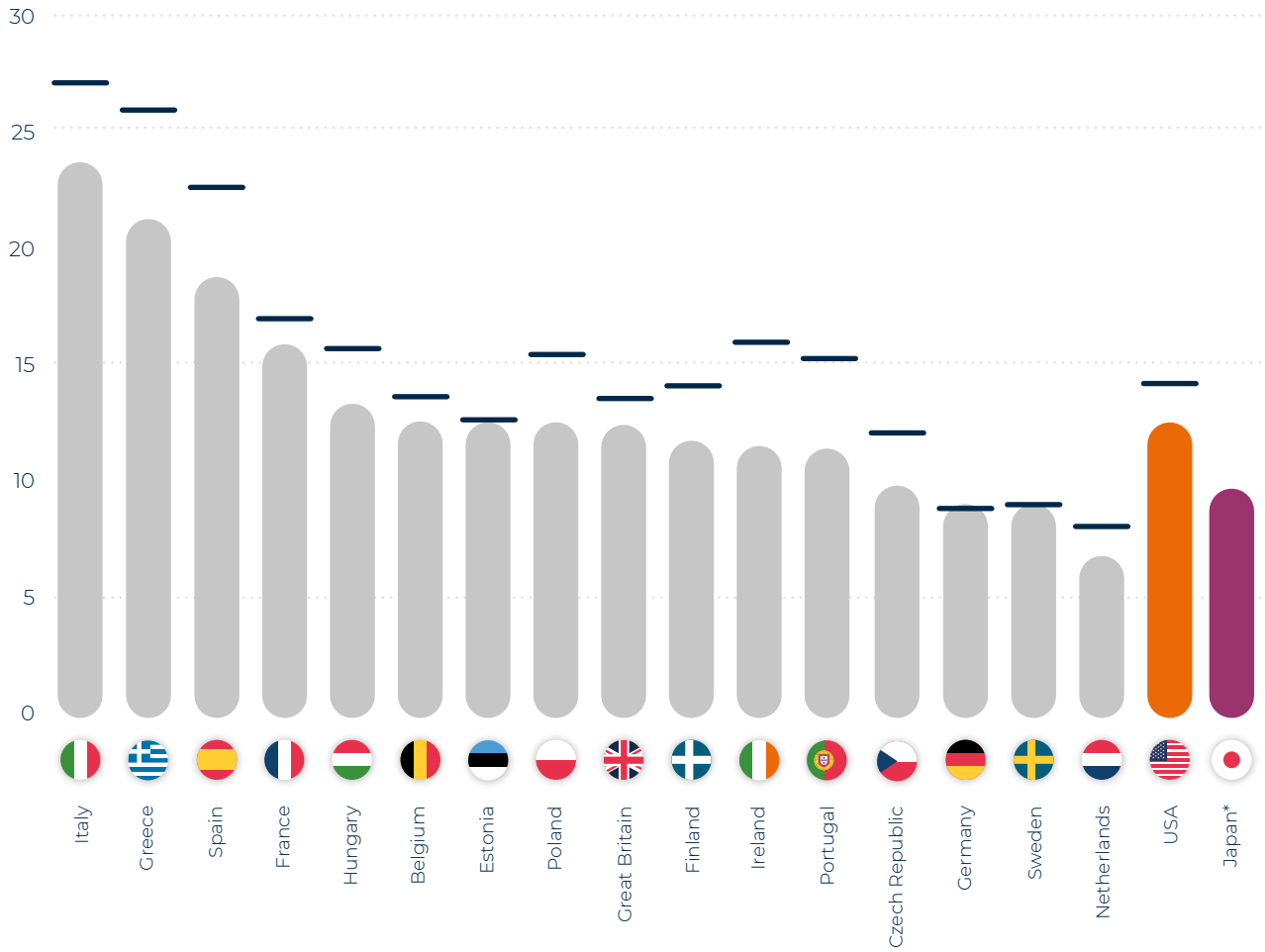

Source: UN

# Economic inactivity among the young remains high, but is falling

**Observation**
The proportion of young people not in employment, education or training has fallen, but remains extremely high in those member states that have suffered the most protracted economic problems.

**Recommendation**
Europe cannot afford to waste talent. More efforts are needed to close the skills gap to make sure that a higher share of young people remains in either education, training or employment.

**The proportion of young people, aged 15-29, not in employment, education or training** (%) 2018 2015




Youth unemployment rate **(EU28: 15.2%)**

| | Italy | Greece | Spain | France | Hungary | Belgium | Estonia | Poland | Great Britain | Finland | Ireland | Portugal | Czech Republic | Germany | Sweden | Netherlands | USA | Japan* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| % | 32.2 | 39.9 | 34.4 | 20.8 | 10.2 | 15.9 | 11.9 | 11.8 | 11.3 | 16.8 | 13.7 | 20.3 | 6.7 | 6.2 | 16.7 | 7.2 | 8.6 | 3.7 |

Total unemployment rate **(EU28: 6.8%)**

| | Italy | Greece | Spain | France | Hungary | Belgium | Estonia | Poland | Great Britain | Finland | Ireland | Portugal | Czech Republic | Germany | Sweden | Netherlands | USA | Japan* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| % | 10.6 | 19.3 | 15.3 | 9.1 | 3.7 | 5.9 | 5.4 | 3.8 | 4.0 | 7.4 | 5.7 | 7.0 | 2.2 | 3.4 | 6.3 | 3.8 | 3.9 | 2.4 |

**Note:** *Japan - Only 2014 data available
**Source:** OECD

# There is no room for complacency on income inequality

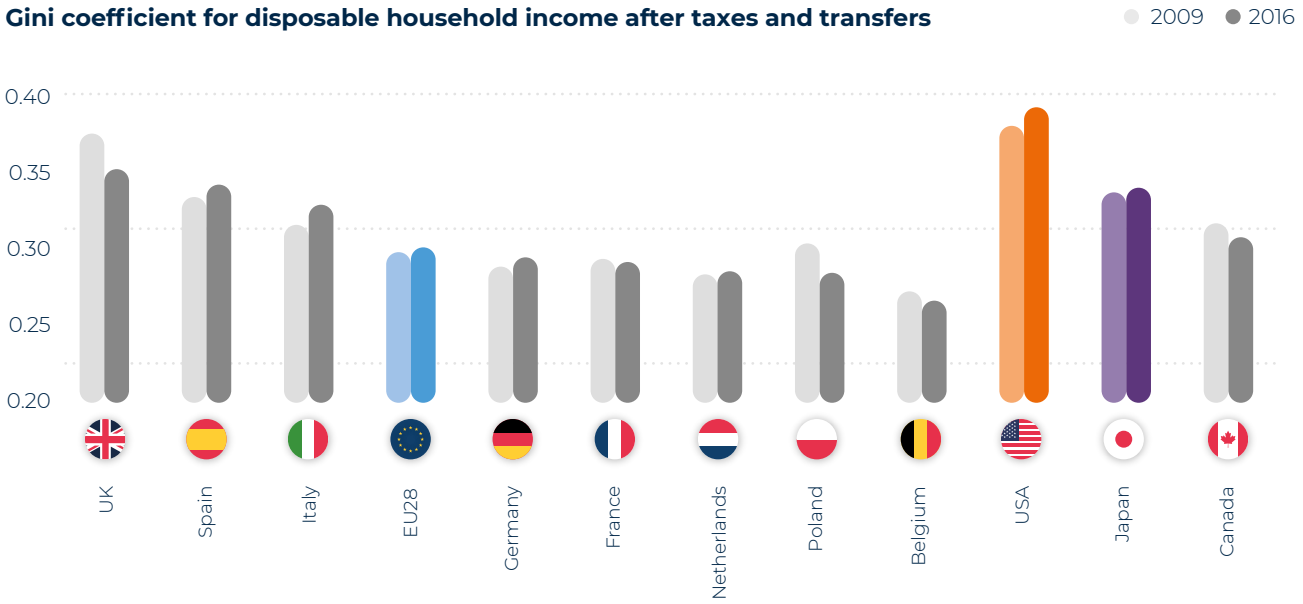
**Observation**

Income inequality in the EU is lower than in the US but has overall not fallen since the financial crisis. Wage polarisation due to technological changes as well as a growing share of elderly who often have low retirement incomes are important factors.

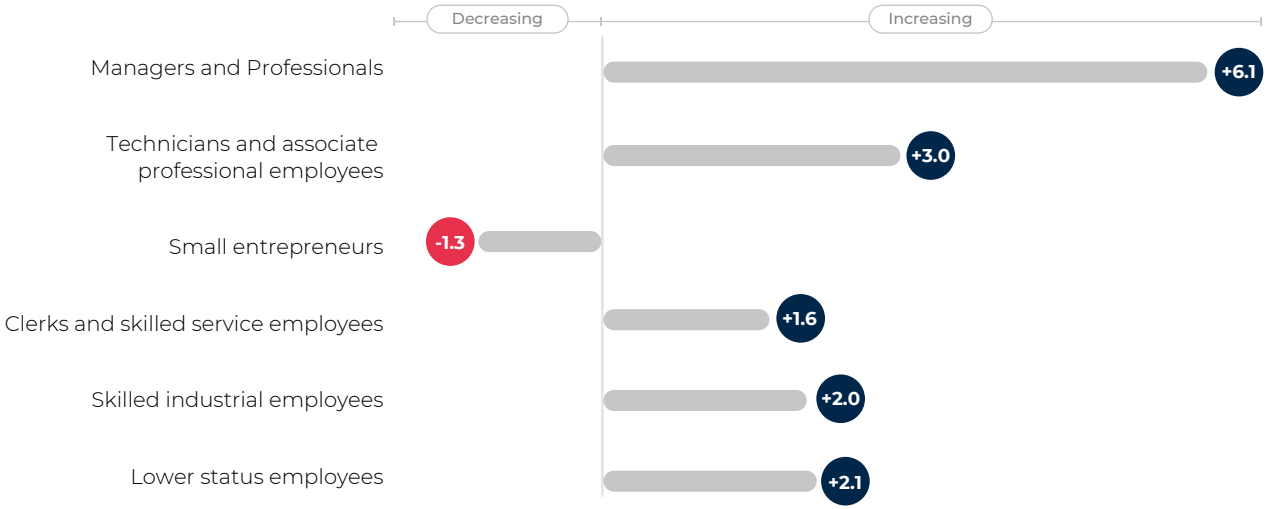
**Recommendation**

Income inequality has been linked to the rise in populism that has been seen on both sides of the Atlantic. In an economy where the pace of innovation - and disruption to jobs - is high, it is essential to safeguard inclusive growth and boost prosperity for all.

**Gini coefficient for disposable household income after taxes and transfers**




**Change in employment in the EU by social-economic group, 2013-2018, millions**




Gini coefficient for disposable household income after taxes and transfers
**Source:** OECD

Change in employment in the EU by social-economic group, 2013-2018, millions
**Source:** Eurostat

# ICT skills investment needs to increase

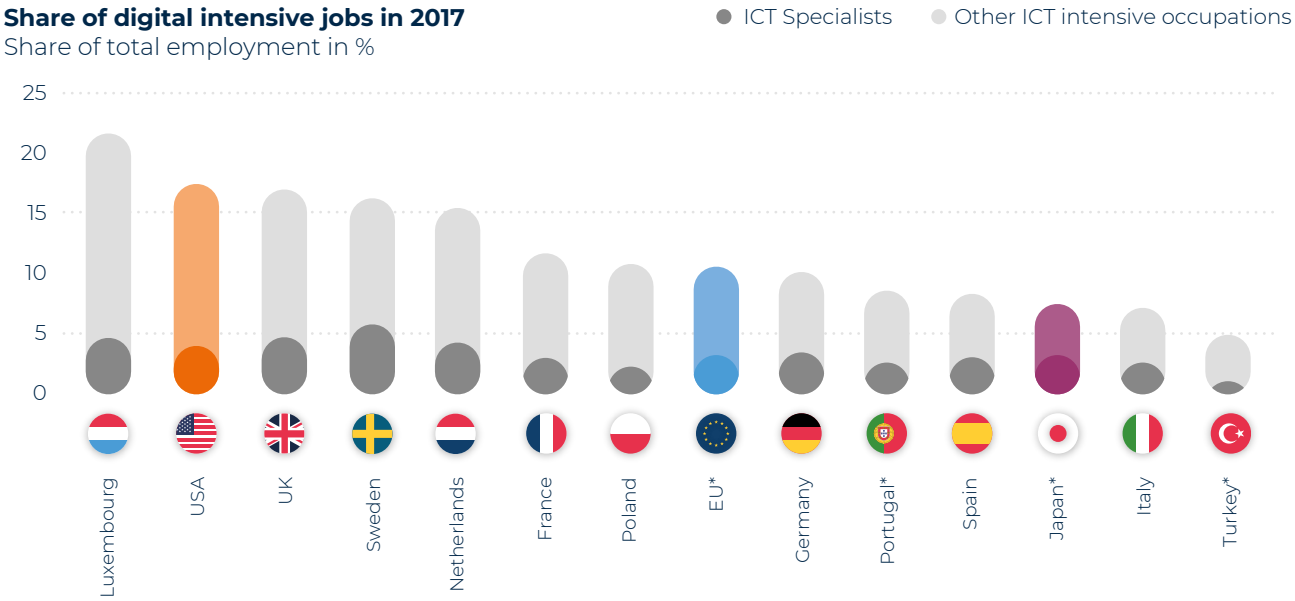
**Observation**

ICT proficiency varies across Europe. There is a high demand for digital skills across sectors and many firms are finding it hard to recruit sufficient ICT specialists, and not only in the ICT sector itself.

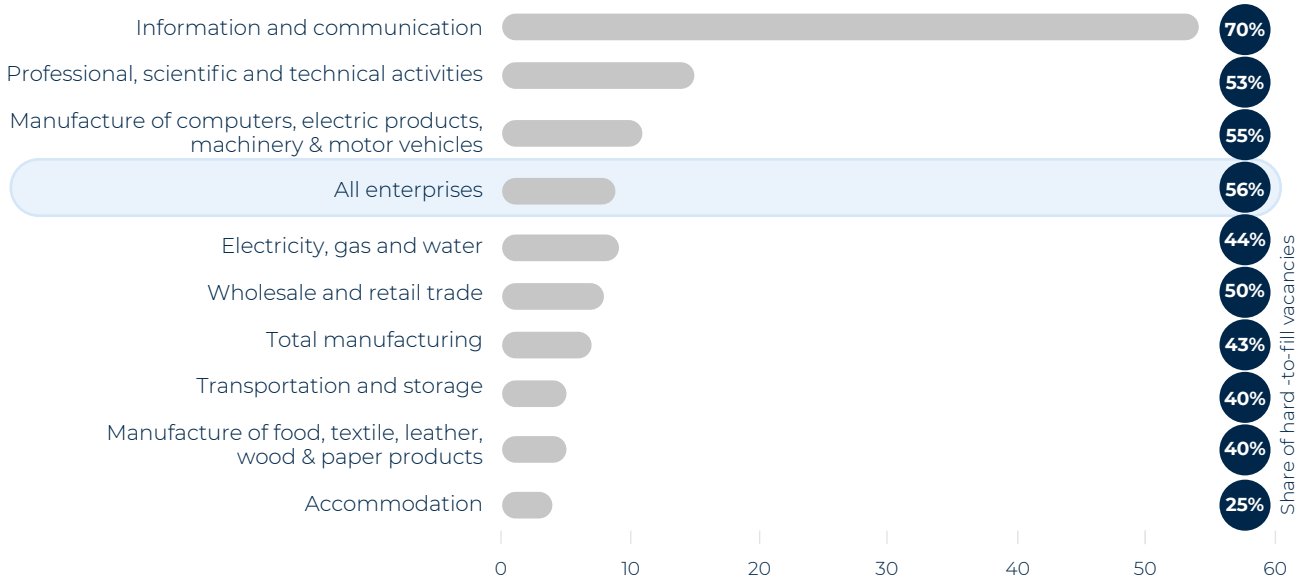
**Recommendation**

The need for ICT skills is acute in some sectors. More investment in overall digital skills, including ICT, is required. Business and government have a shared responsibility to ensure the pipeline of skilled staff is strong, e.g. by regularly updating curricula and applying a targeted approach based on skills needs.

**Share of digital intensive jobs in 2017**
Share of total employment in %




**EU enterprises that recruited or tried to recruit ICT specialists in 2018** (%)



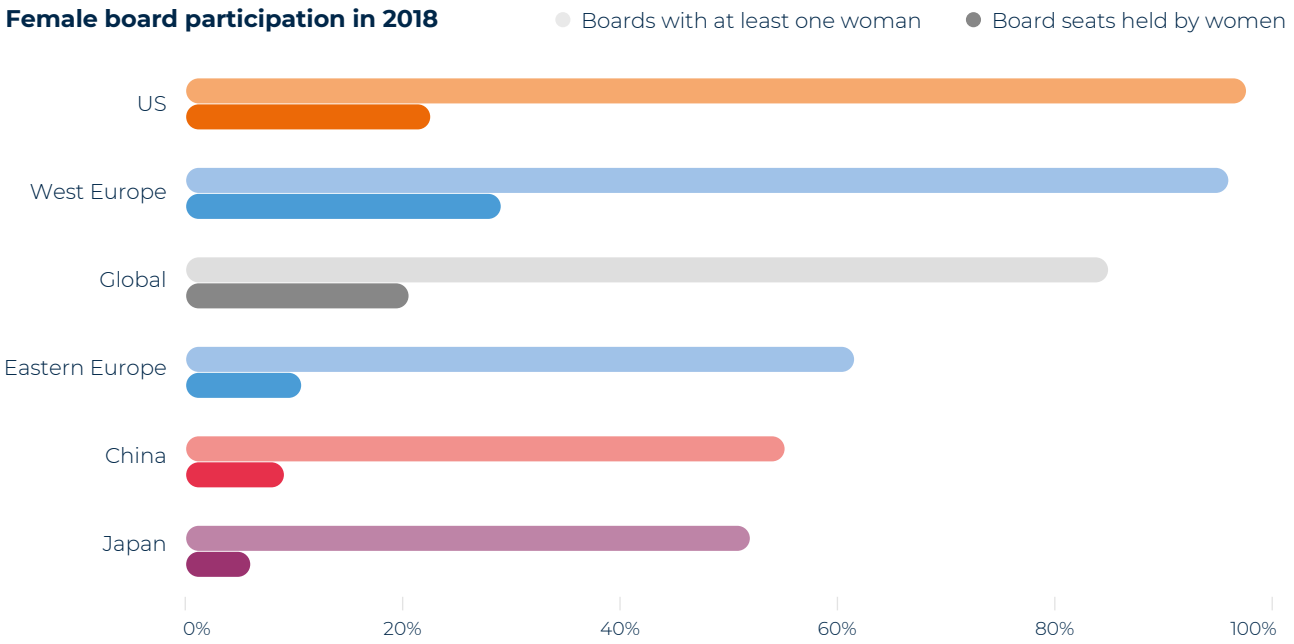

Share of digital intensive jobs in 2017
**Note:** * Data from 2015
**Source:** OECD

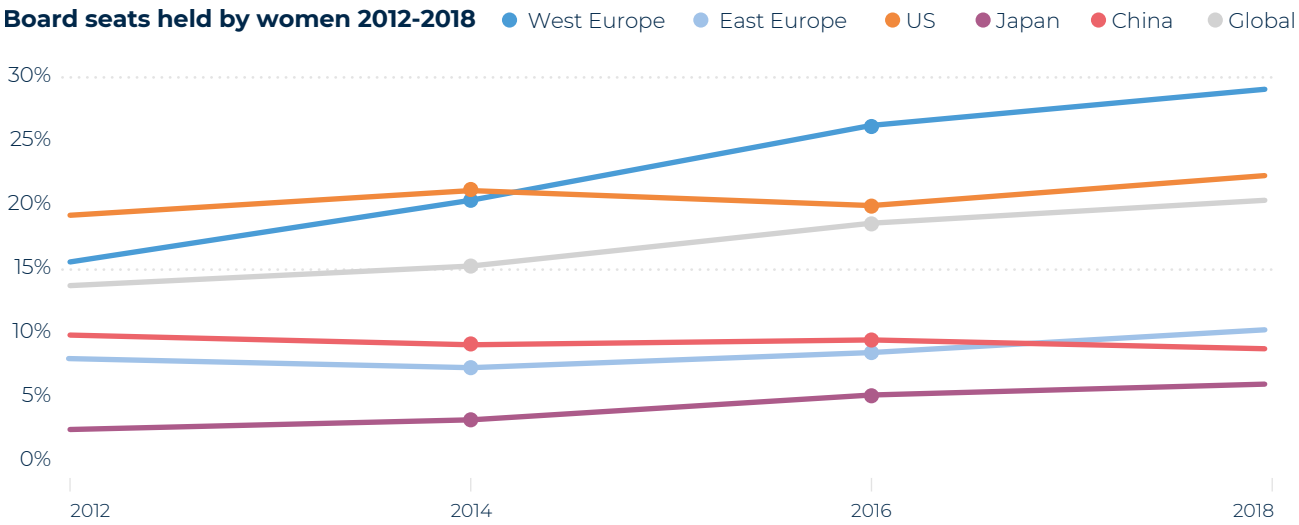
EU enterprises that recruited or tried to recruit ICT specialists in 2018
**Source:** Eurostat

# Gender equality is the goal, but there is still much room for improvement

**Observation**
Companies in western Europe have more women in board rooms and the proportion of board seats held by women has increased sharply. But there is still a wide gap between the proportion of women and men in European board rooms.

**Recommendation**
ERT Member companies have pledged to create an inclusive business culture with equal opportunities for all and share good practice to achieve this goal. The proportion of women in board rooms is one measure of diversity.



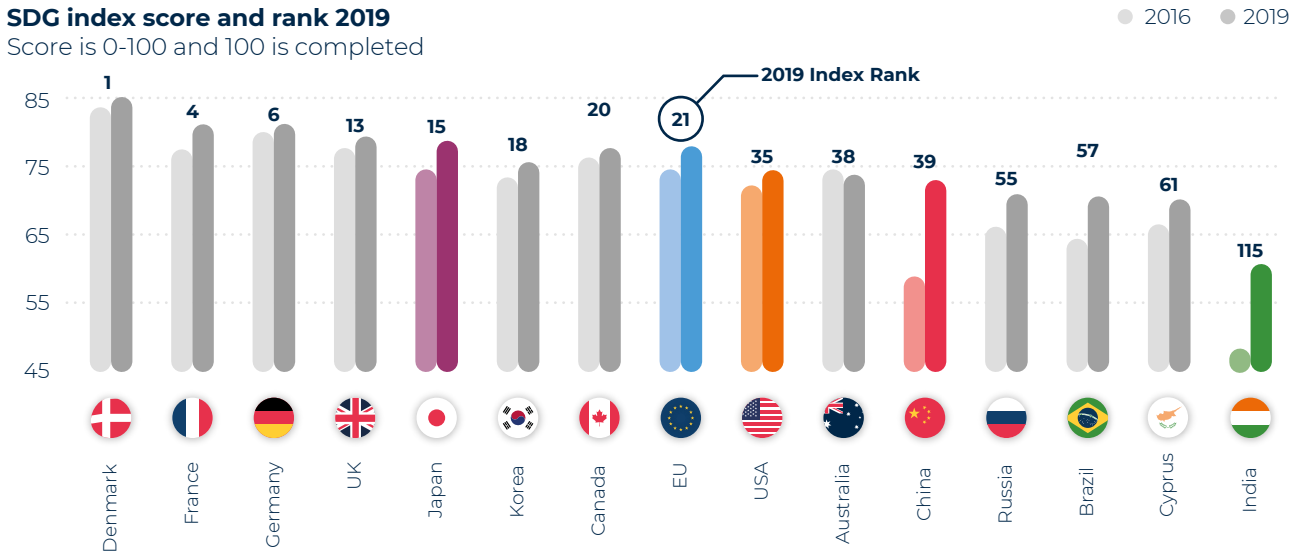

**Source:** EgonZehnder Global Board Diversity Tracker

# Europe is leading in the implementation of the Sustainable Development Goals

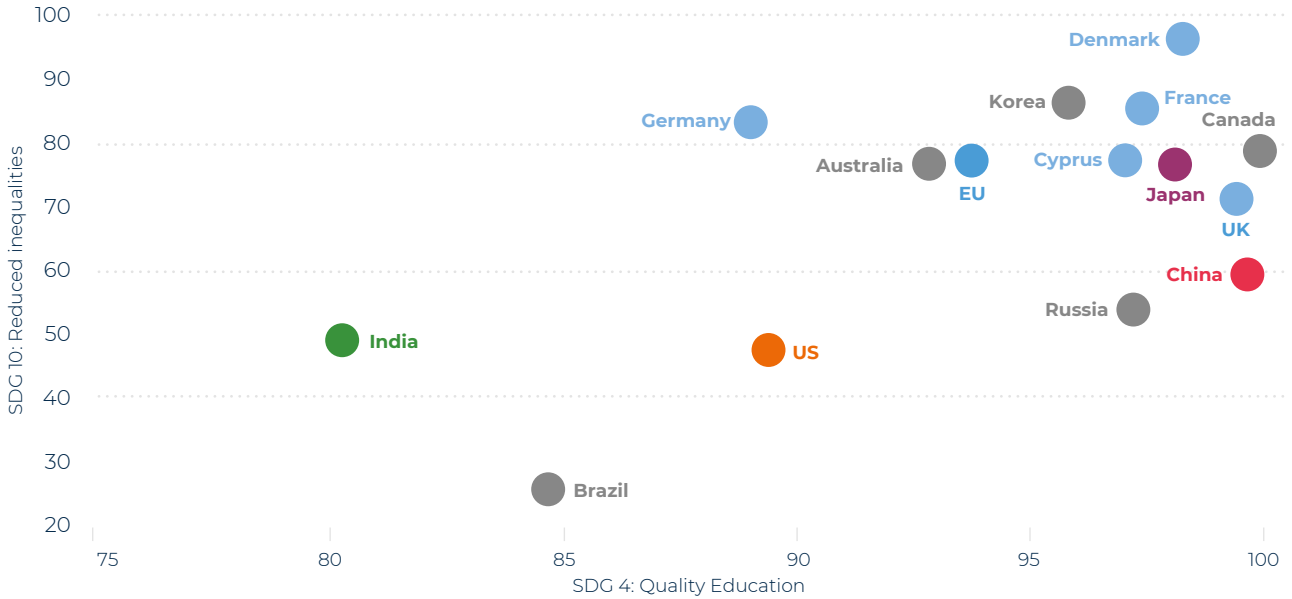
**Observation**
The EU and its member states are leading in the implementation of the UN SDGs. But other countries are catching up, allowing them to develop a better educated, healthier and as a result, more productive workforce and a more conducive business environment.

**Recommendation**
Europe must continue taking the lead in promoting inclusive and sustainable growth to the benefit of all. This is fully aligned with European values and supported by the European global companies represented by ERT.

**SDG index score and rank 2019**
Score is 0-100 and 100 is completed




**Selected metrics from SDG index 2019**
Score is 0-100 and 100 is completed




**Source:** Bertelsmann Stiftung and Sustainable Development Solutions Network

# Digital Transformation

# Trust needs to be built in providers of technology & government strategies

**Observation**

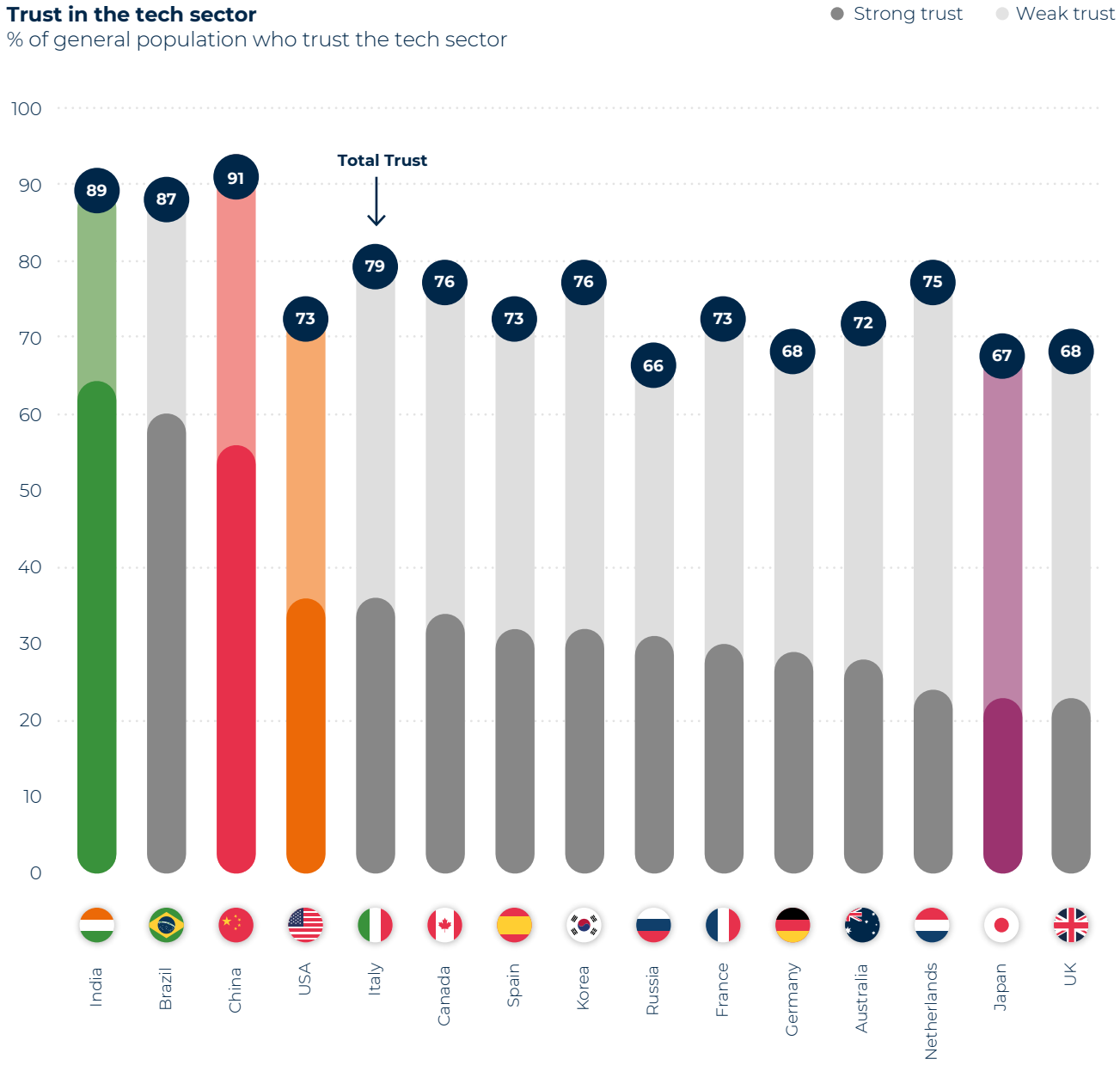
Trust of Europeans in the tech sector is weak compared to the EU's main competitors. One reason is that privacy concerns in Europe are greater compared to other markets.

**Recommendation**

There is a risk that businesses and consumers refrain from adopting and using new technologies that allow Europe to compete internationally. Policymakers and business should partner to engage citizens in active dialogue that builds confidence and acceptance of new technologies and implementation of national cyber security strategies.

**Trust in the tech sector**

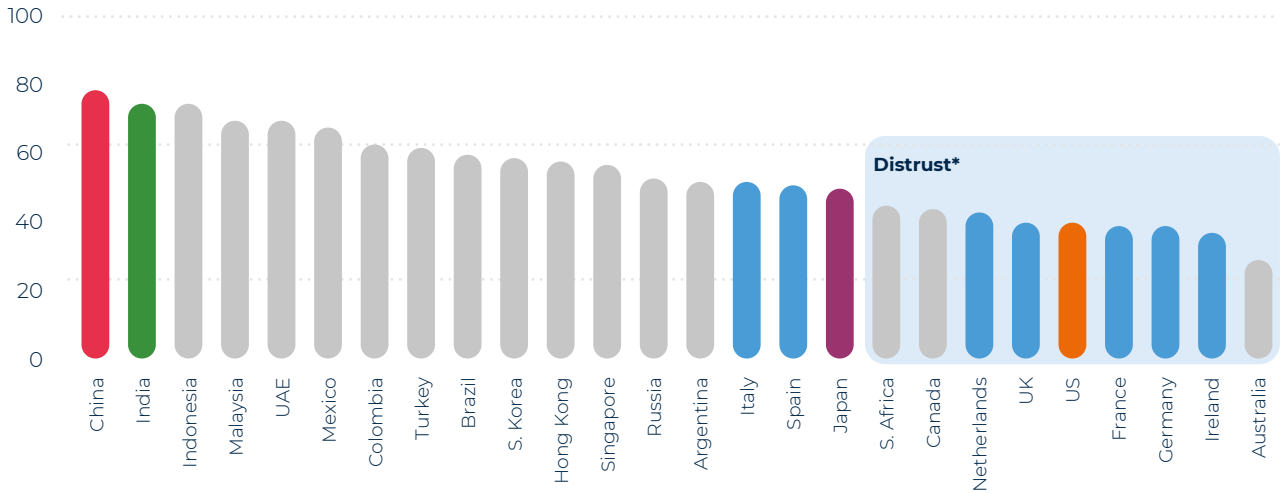
% of general population who trust the tech sector



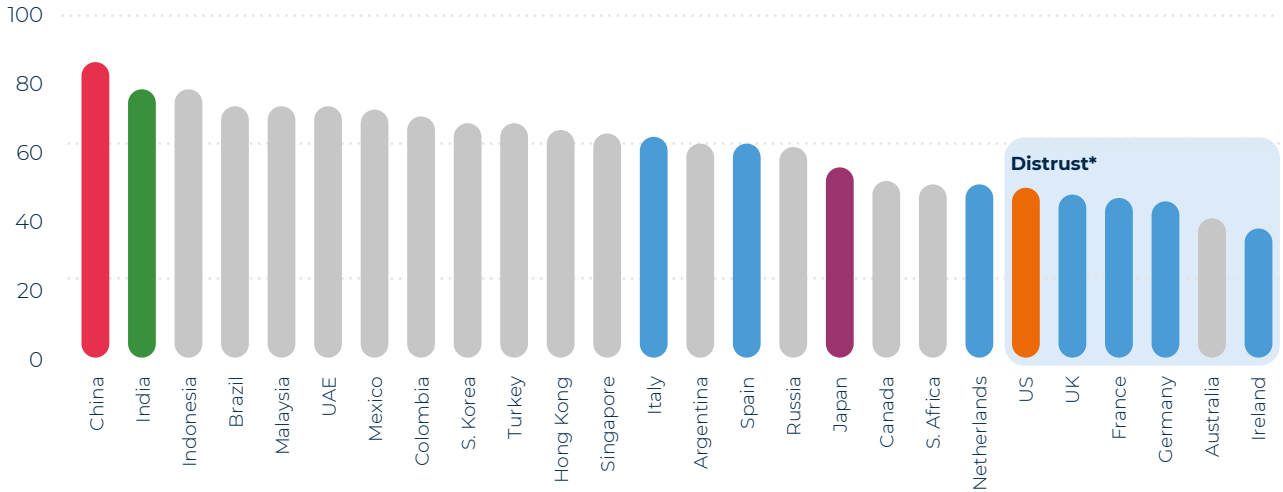

**Source:** 2019 Edelman Trust Barometer

**Trust in new technologies:** % of general population who trust...

### Self-driving vehicles




### Artificial Intelligence (AI)




**Note:** *Defined as trust of below 50%.

**Source:** 2019 Edelman Trust Barometer

# Vigilance on cybersecurity needs to be maintained

### Observation

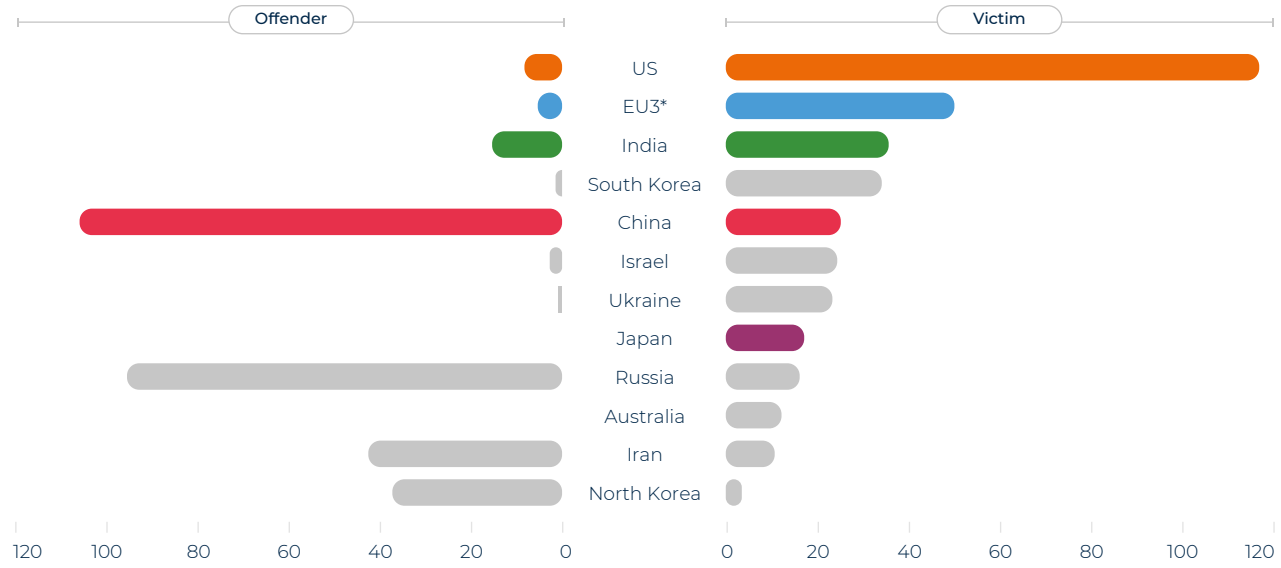
Data breaches are costly, averaging over $150 per head globally, although the average cost in the US is considerably higher than in large European states.

### Recommendation

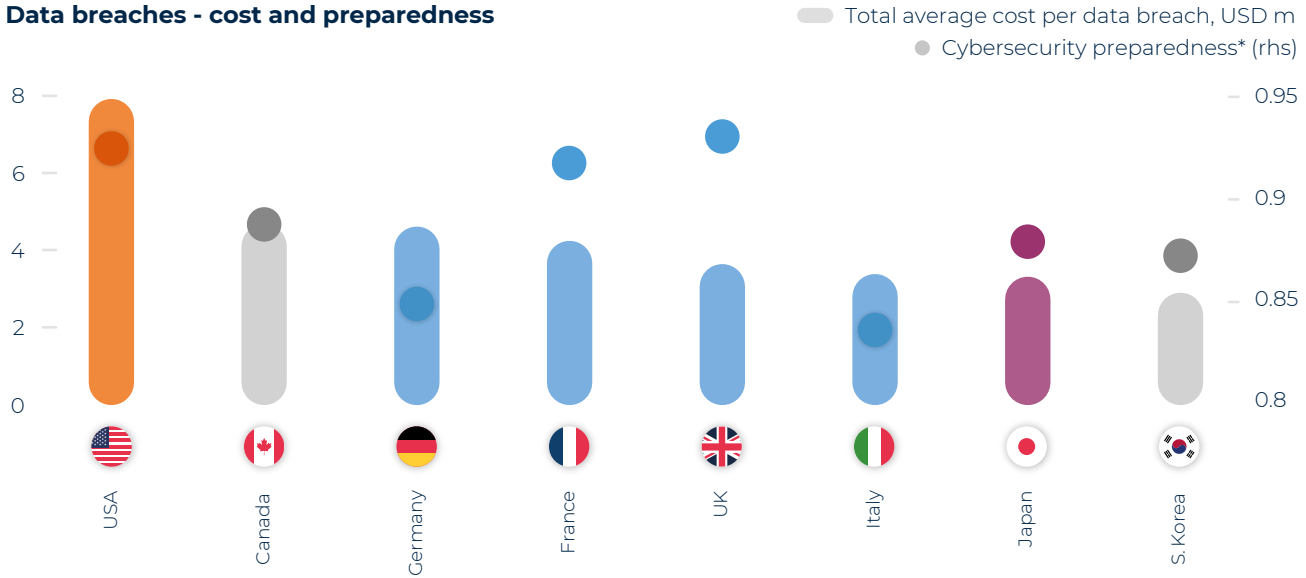
Governments and companies should invest more in cybersecurity and collaborate more closely to prepare for and respond to attacks. There is room for all countries to assess the effectiveness of cybersecurity investments, particularly as threats are constantly changing. Public policy frameworks should offer the right incentives (and a sound horizontal approach to security policy) to invest in cybersecurity. Users need to trust that their digital technologies are safe and secure. Digitalisation and cybersecurity must evolve hand in hand.

**Significant cyber Incidents since 2006**

Number of cyber attacks on government agencies, defense and high tech companies, or economic crimes with losses of more than a million dollars




**Data breaches - cost and preparedness**



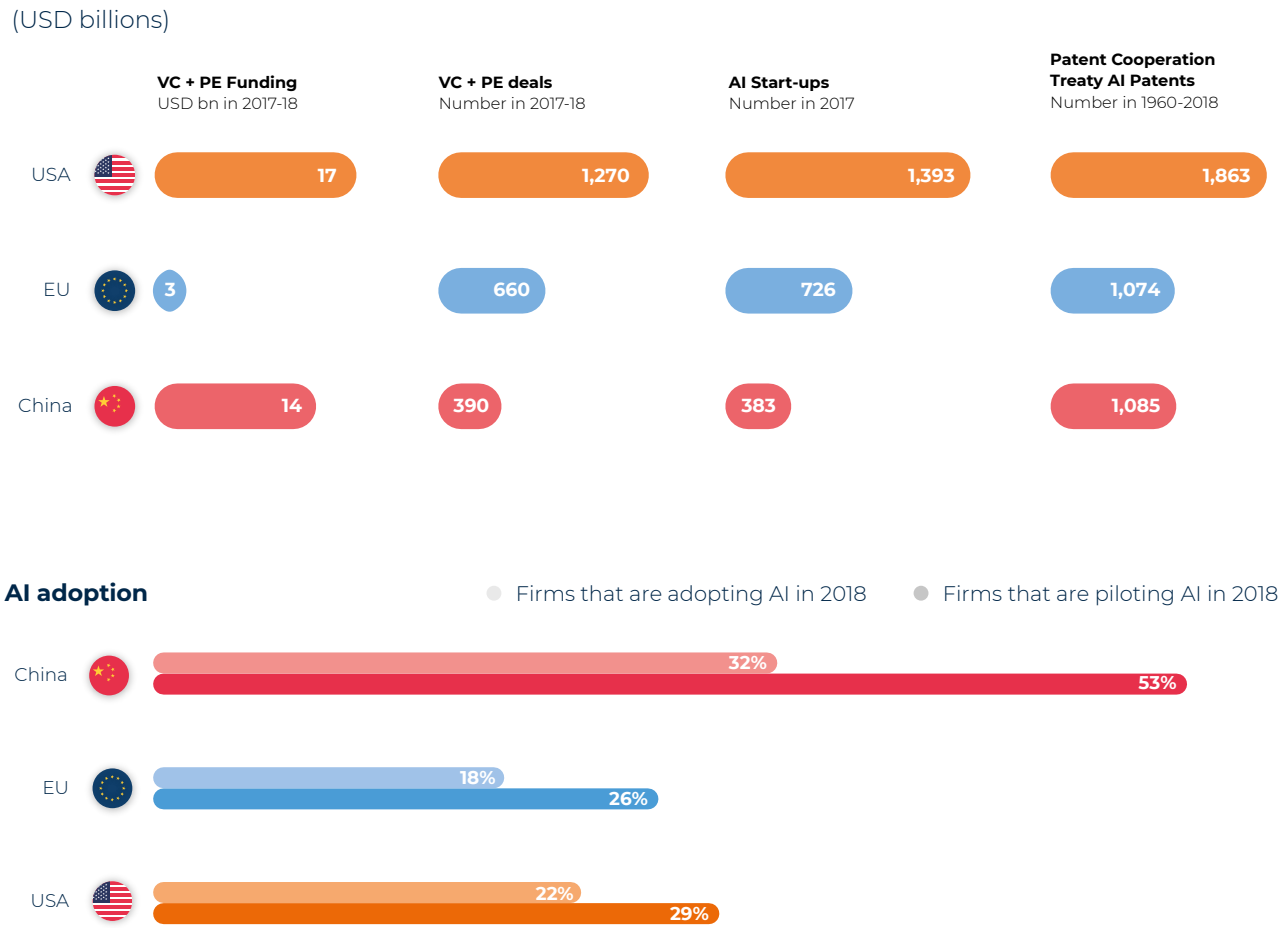

Significant cyber Incidents since 2006
**Note:** *EU3 = France, Germany and UK
**Source:** CSIS as of June 2019

Data breaches - cost and preparedness
**Note:** *measured by the ITU Global Cybersecurity Index 2018
**Source:** IBM, Ponemon Institute, ITU

# Europe needs to seize more of the opportunities provided by AI

**Observation**
Artificial intelligence (AI) offers a big opportunity for Europe, but achieving this requires large investment in the companies that develop AI in the first place as well as in AI adoption by companies across all industries. Other regions are leading in this area, notably the US and China.

**Recommendation**
Policymakers, public research institutions and businesses must work together to ensure the necessary sense of urgency and investment focus in industrial AI-technologies and applications, specifically in domains of strength where Europe plays a leading role. The EU should also in this area assume leadership in global standard-setting based on its values.




Total estimated private equity investment in AI startups, by start-up location
**Notes:** VC = venture capital / PE = private equity / Numbers listed are absolute values.

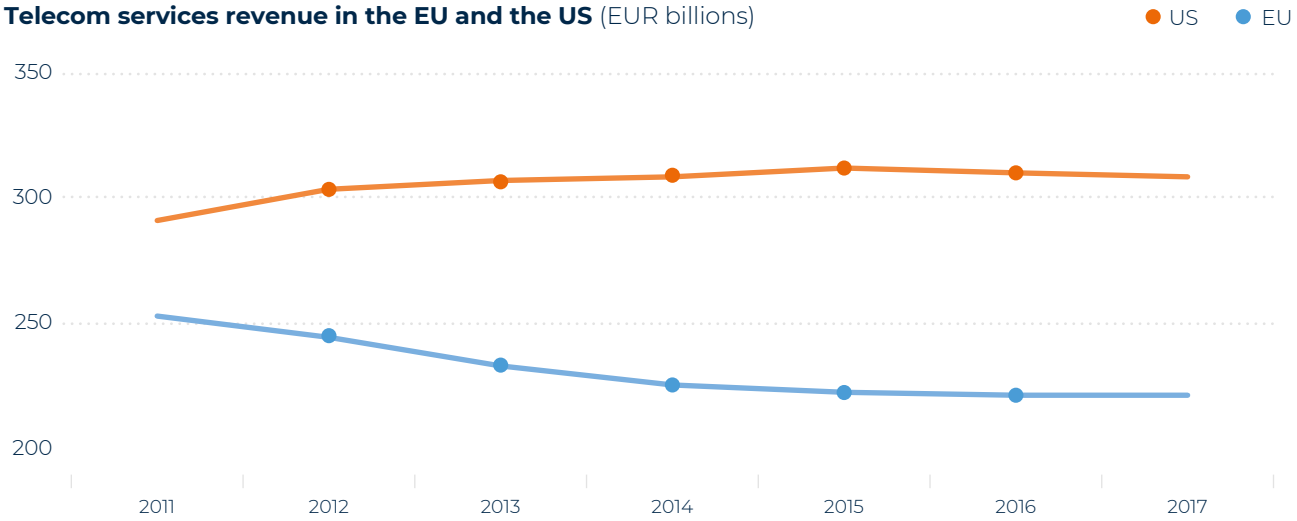
**Source:** Center for Data Innovation

# EU telecoms infrastructure needs investment

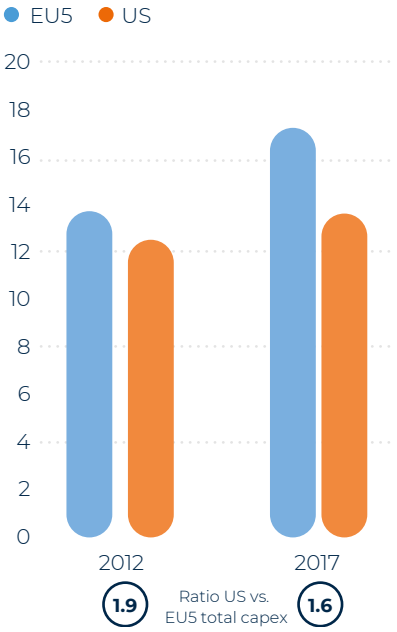
**Observation**
Telecoms service revenues have fallen and are stagnating in Europe - and the gap with the US remains high. European operators' capital expenditure as share of sales has been growing and is higher than in the US. At the same time, European operators are investing significantly less per capita than operators in the US and Japan.

**Recommendation**
Telecoms infrastructure needs more investment in Europe if the increasing demand for services is to be satisfied. A more investment-friendly framework in the EU is urgently required.

**Telecom services revenue in the EU and the US** (EUR billions)




**Capex as a share of total sales** (%)
Ratio US vs. EU5 total capex




**Telecom capex per capita** (EUR)


Telecom services revenue in the EU and the US
**Source:** IDATE

Capex as a share of total sales
**Note:** EU5 = France, Germany, Italy, Spain and UK
**Source:** IDATE

Telecom capex per capita in 2017
**Note:** Europe = members of the European Telecommunications Network Operators' Association (ETNO)
**Source:** Analysys Mason

# Europe must be competitive in 5G

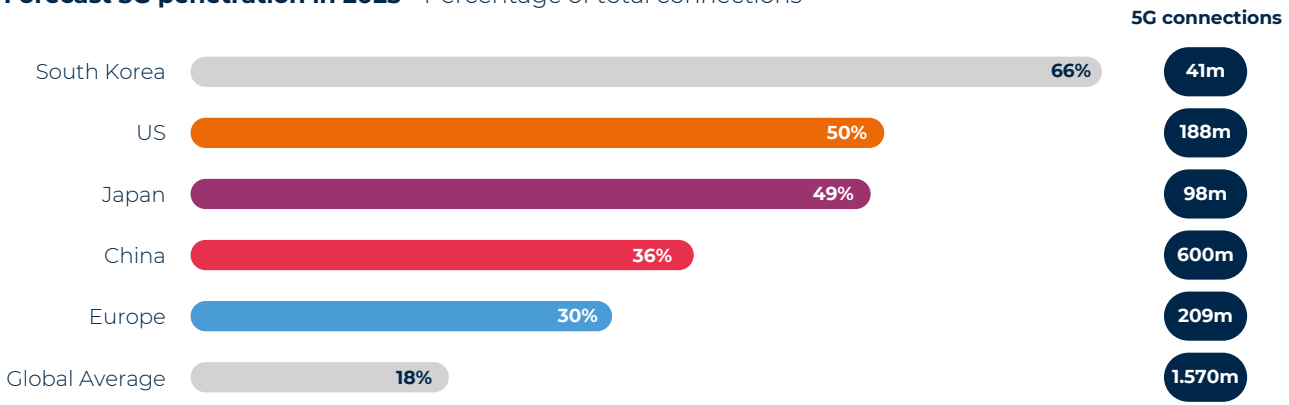
**Observation**

Success in 5G will be a great driver of economic leadership in the 21st century. 5G will be the key for the digital transformation and for the internet of things, artificial intelligence and other technologies to work. The EU risks falling behind other major economies in providing 5G infrastructure and allowing the full potential of its commercialisation.

**Recommendation**

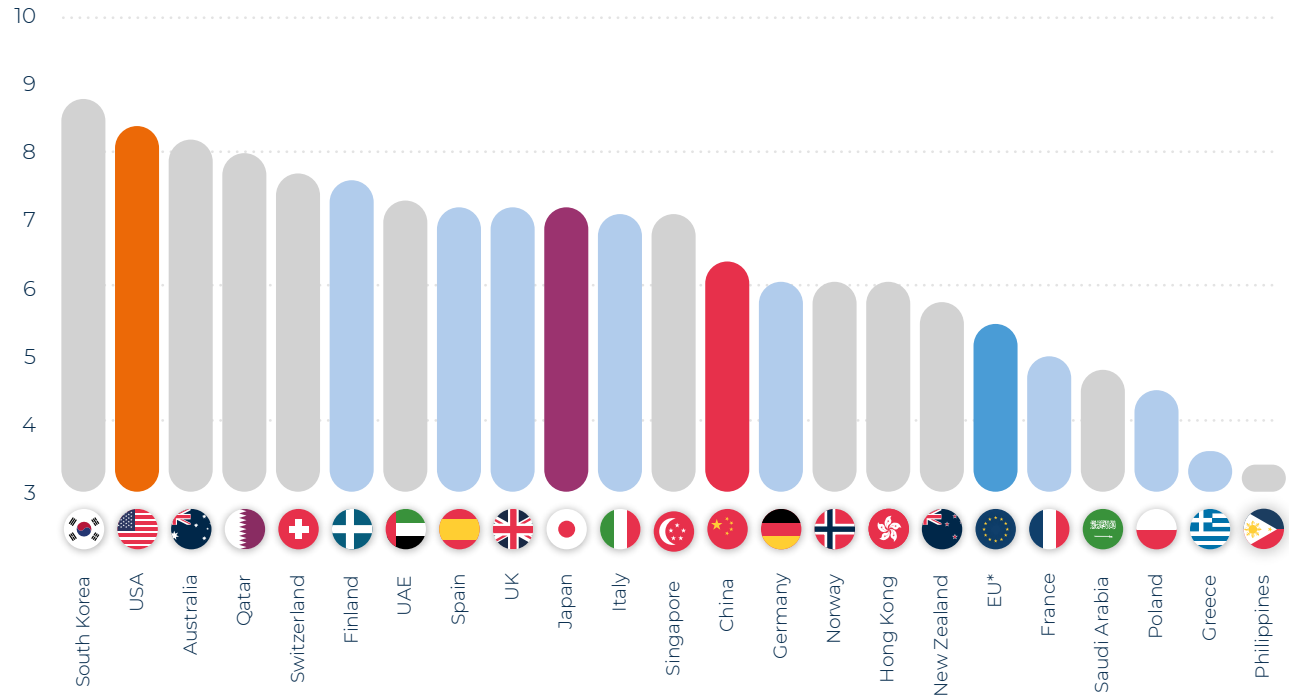
A harmonised framework for 5G spectrum, assignment and operation is decisive for early availability at pan-European scale. This should avoid fragmentation and enable 5G for B2B applications on top of enhanced mobile broadband. Spectrum assignment procedures must prioritise investment in coverage and capacity over upfront fees. Europe should also introduce measures that instil trust in 5G.

**Forecast 5G penetration in 2025 -** Percentage of total connections




**5G Leadership Index ranking**

Index 1-10 (10 = best) measuring 5G commercialisation and infrastructure




Forecast 5G penetration
**Source:** GSMA intelligence

5G Leadership Index ranking
**Note:** *Simple average of EU countries excluding Malta
**Source:** Arthur D. Little

# Data is essential for industrial digital transformation

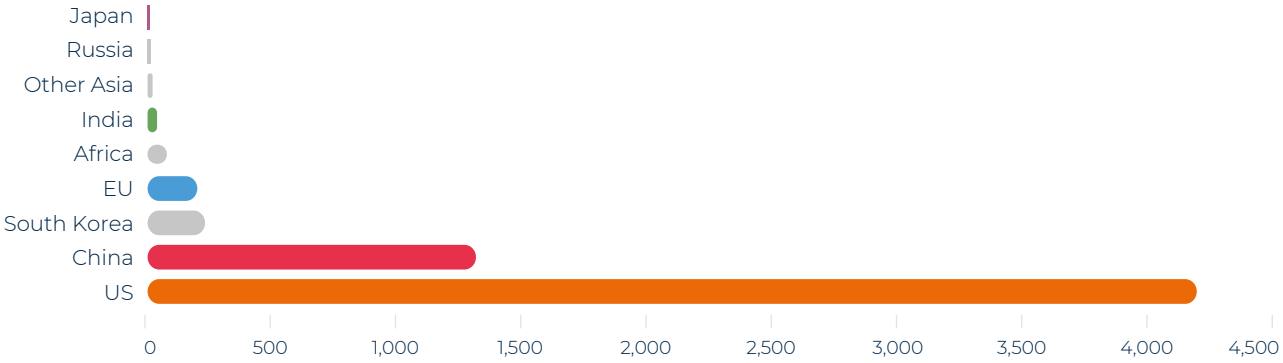
## Observation

The EU lags behind other regions in developing platform companies. This is especially the case for business-to-customer (B2C) platforms. The development of business-to-business (B2B) platforms is still at an earlier stage and Europe cannot afford to fall behind in their development too if it wants to ensure its industrial competitiveness. More businesses across the EU are now performing big data analysis and integrating this into their approaches to innovation and growth. This is essential if productivity is to increase and the full potential of digital transformation is to be realised.

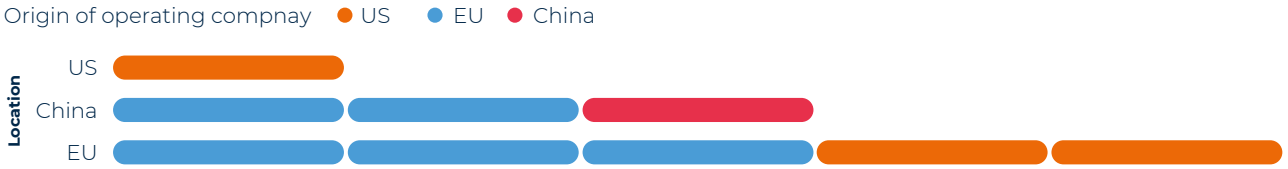
## Recommendation

A wealth of valuable data is being created in Europe by governments, industry and citizens. Data availability should be fostered, on a voluntary basis, for innovative use in industrial digital platforms and AI while safeguarding intellectual property rights, security, data protection, confidentiality and any applicable contractual arrangements. Especially for AI it is key to ensure the availability of good quality training data for AI algorithms as these will present a critical success factor for effective AI offerings. As there is a general trend towards the development of 5G networks and IoT worldwide, we need to make sure that consumers and businesses are seamlessly connected, and data flows are undisrupted. The EU should assume its role as a global leader by promoting its free flow of machine data standards globally.

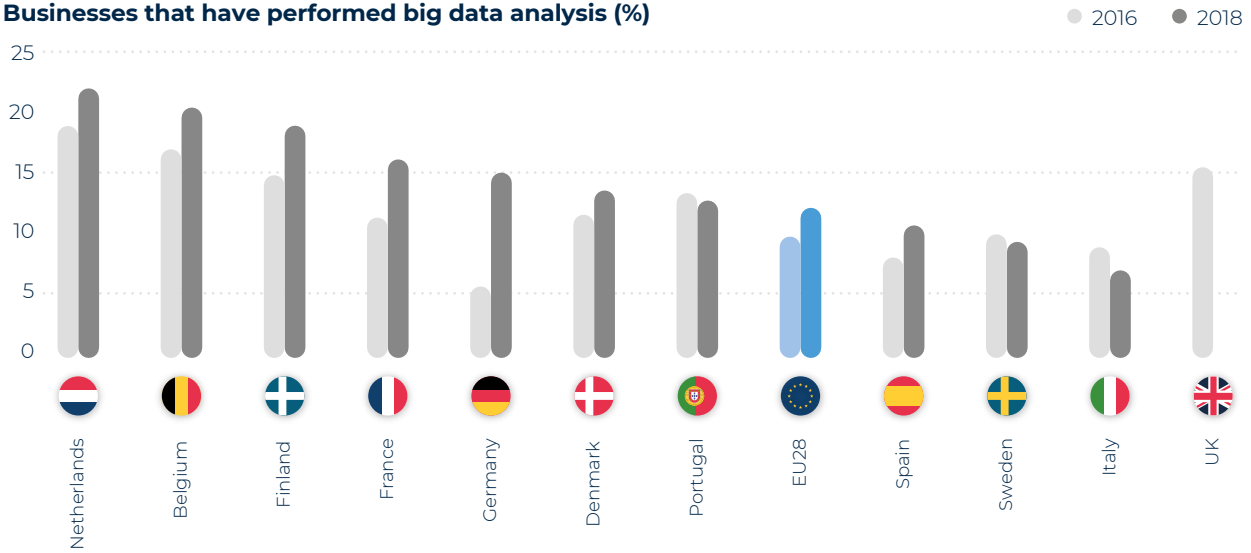
**Market valuations of online platforms** (USD billion, December 2018)




**The WEF's nine best factories of the world in 2018 by location and origin of operating company**




**Businesses that have performed big data analysis (%)**




Market valuation of online platforms
**Source:** Source: Dr Holger Schmidt (TU Darmstadt/Netzoekonom.de), adopted from European Political Strategy Centre 2019

The WEF's nine best factories of the world in 2018 by location and origin of operating company - **Source:** World Economic Forum

Markert valuation of online platforms
**Note:** *No 2018 data for the UK. **Source:** Eurostat

# Energy Transition & Climate Change

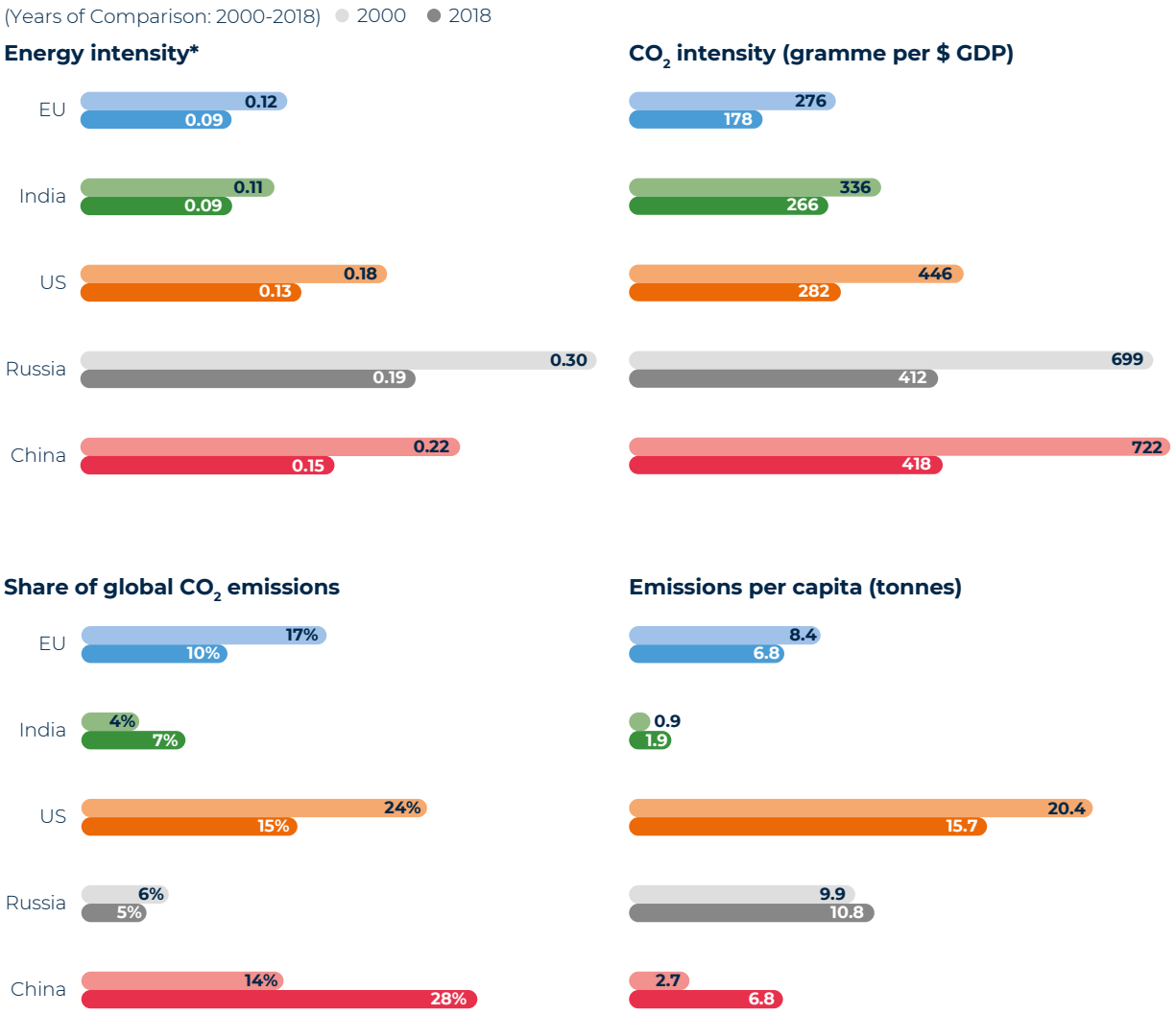
# Europe is leading in reducing energy intensity and emissions

**Observation**

The European economy is substantially less energy-intensive and less $CO_2$-intensive than the Chinese, Russian or American economies, while the European share of global $CO_2$ emissions has fallen to just 10%.

**Recommendation**

Europe has shown global leadership in reducing energy intensity and greenhouse gas emissions in the past – and must continue to do so. All countries will have to show similar commitment to ensure the Paris Agreement is fully implemented.




**Note:** *Million tonnes of oil equivalent of primary energy consumption/GDP (PPP constant 2011 USD billion)
**Source:** BP, World Bank, Global Counsel calculations

# Carbon pricing mechanisms continue expanding worldwide

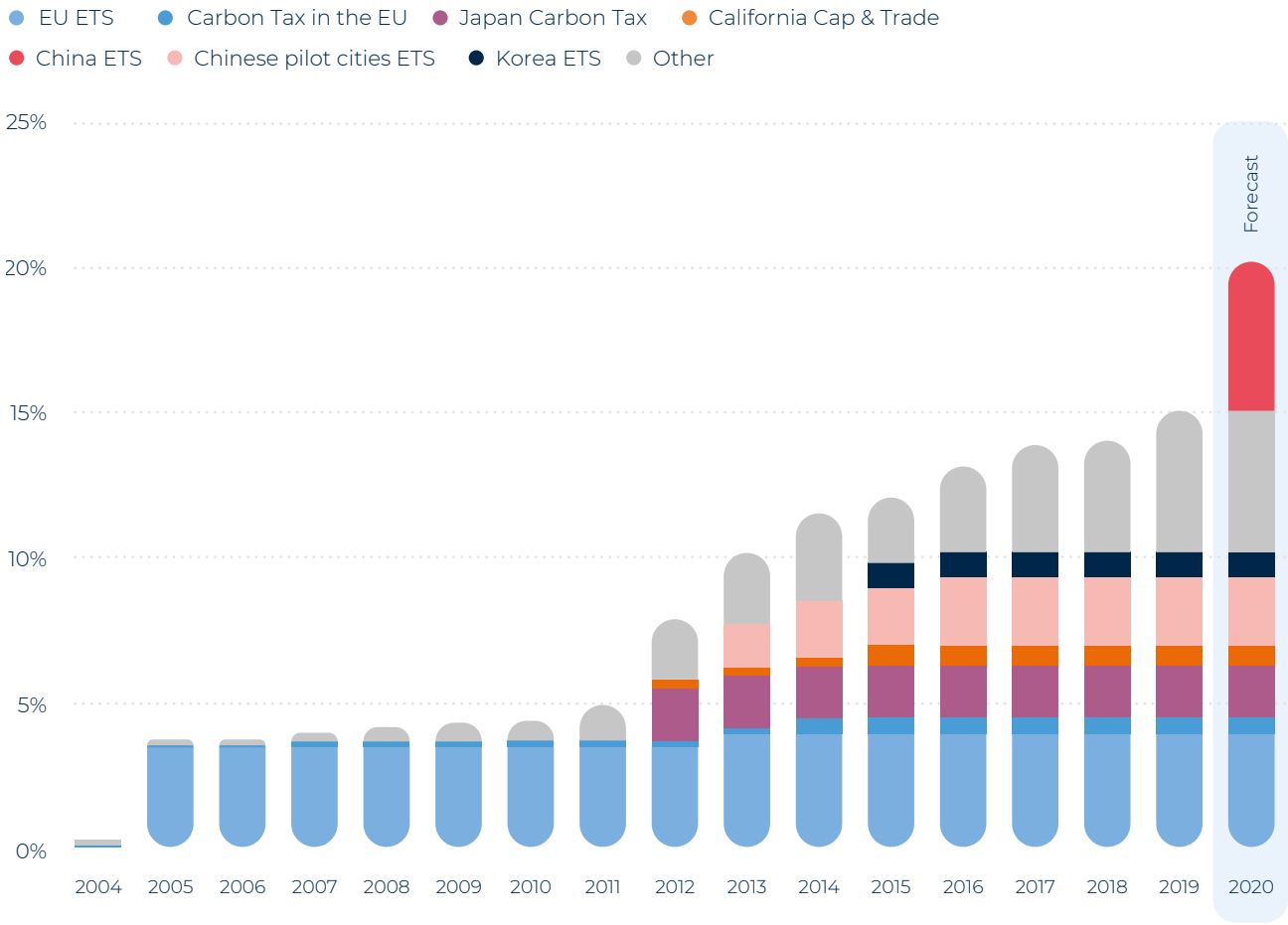
**Observation**

Carbon pricing continues to be adopted as a key policy tool to meet climate targets, with at least 11 new initiatives implemented in 2018 and 2019. In 2020 with the national ETS in China becoming active, total emissions covered by carbon pricing will increase from about 15% to 20%.

**Recommendation**

The EU should continue to support the pricing of carbon outside Europe at least at G20 level to create a level playing field and enable low carbon technologies for industry to be competitive.

**The share of global greenhouse gas emissions covered by carbon pricing initiatives***




**Note:** *Only the introduction or removal of an ETS or carbon tax is shown. Emissions are given as a share of global GHG emissions in 2012. Annual changes in global, regional, national, and subnational GHG emissions are not shown in the graph. If emissions that are covered by multiple carbon pricing initiatives shown in the graph, these are attributed to the carbon pricing initiative that was introduced first. Due to the dynamic approach to continuously improve data quality, changes to the graph do not only reflect new developments, but also corrections following new information from official government sources.

**Source:** Ecofys, World Bank. This is an adaptation of an original work by The World Bank. Responsibility for the views and opinions expressed in the adaptation rests solely with the author or authors of the adaptation and are not endorsed by The World Bank.

# Taxes, levies and policy cost are leading to disparity and distortions in electricity prices

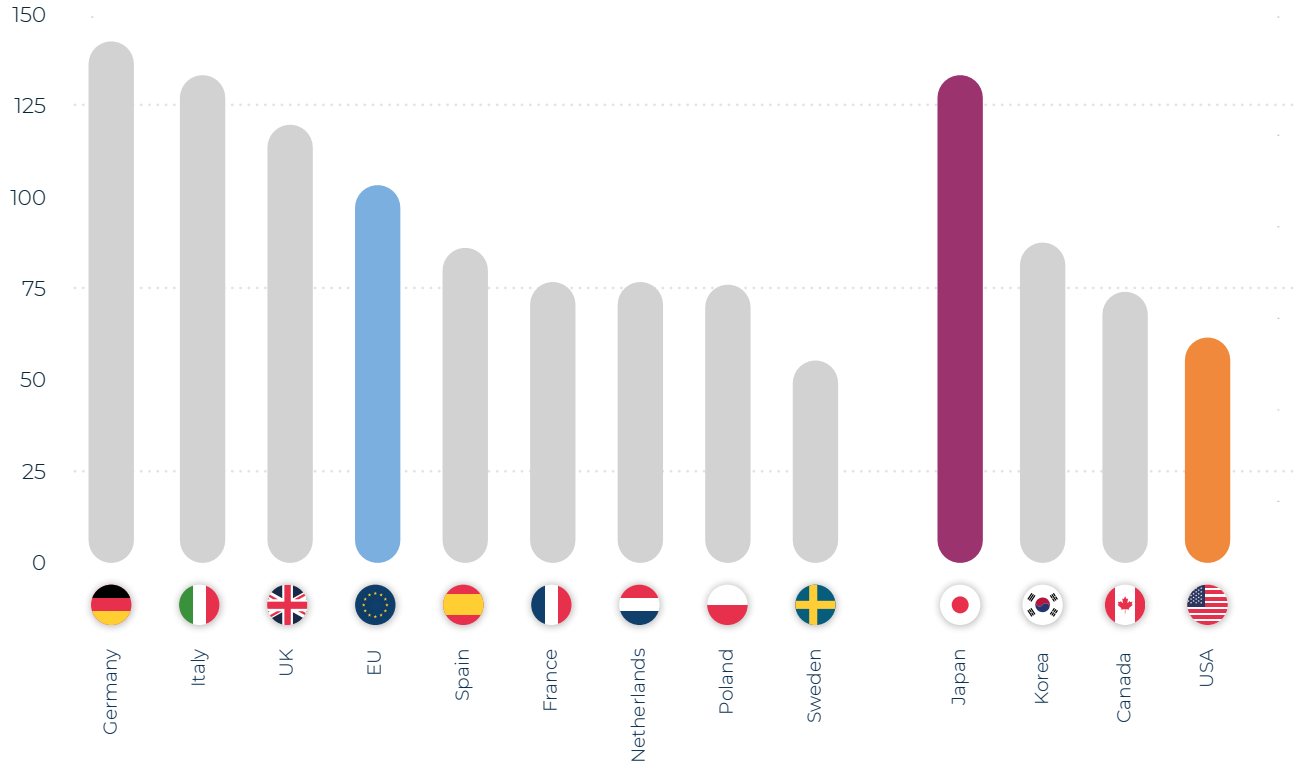
**Observation**

Tax now accounts on average for 38% of the electricity price for industrial users in the EU and contributes to sustaining prices at high levels by international standards.

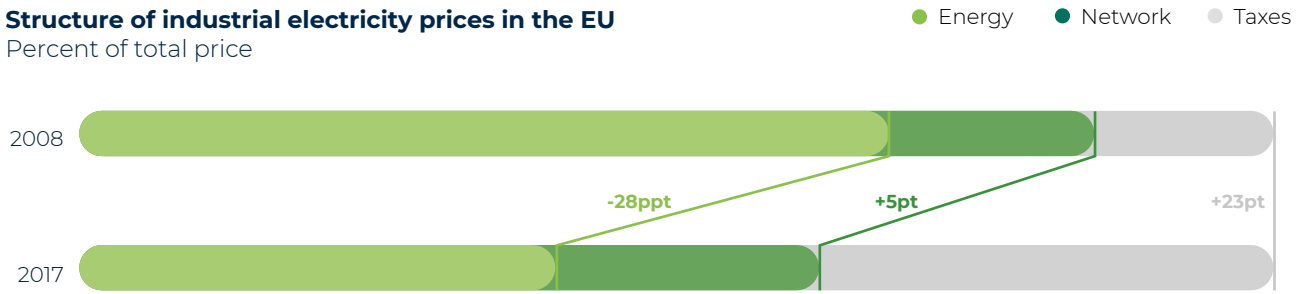
**Recommendation**

Energy prices, including electricity prices for industrial users, are a major driver of competitiveness in many industrial sectors[1]. Energy and industrial policies must be closely aligned to boost competitiveness.

**Industrial electricity prices**
EUR/MWh in 2017




**Structure of industrial electricity prices in the EU**
Percent of total price




1 For example, outside Europe, because of different design of the electricity markets, industries are not charged for the carbon content in the electricity cost.

**Note:** Data for the EU and member states is collected by DG ENER. Data for Japan, Korea, Canada and the US is from the UK Department for Business, Energy and Industrial Strategy derived from the International Energy Agency (IEA) publication, Energy Prices and Taxes. The IEA's data collection methodology is not fully consistent across countries and also differs slightly from DG ENER.

**Source:** DG ENER, UK Department for Business, Energy and Industrial Strategy derived from the International Energy Agency publication, Energy Prices and Taxes

**Source:** Global Counsel calculations.

# European leadership in renewables investment is being challenged

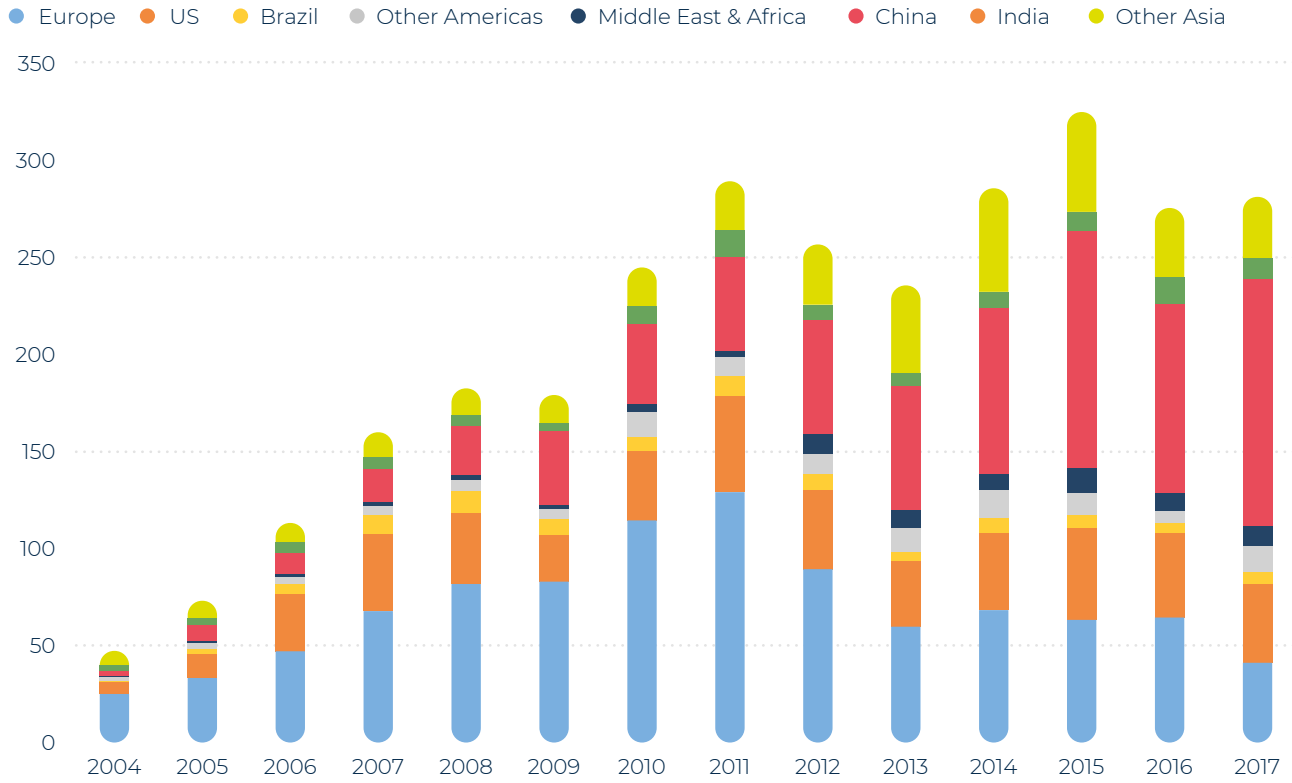
**Observation**

Europe remains a global leader in renewable energy investment, but China is now the world's biggest investor. Within Europe there is a significant variation in the level of investment across countries.

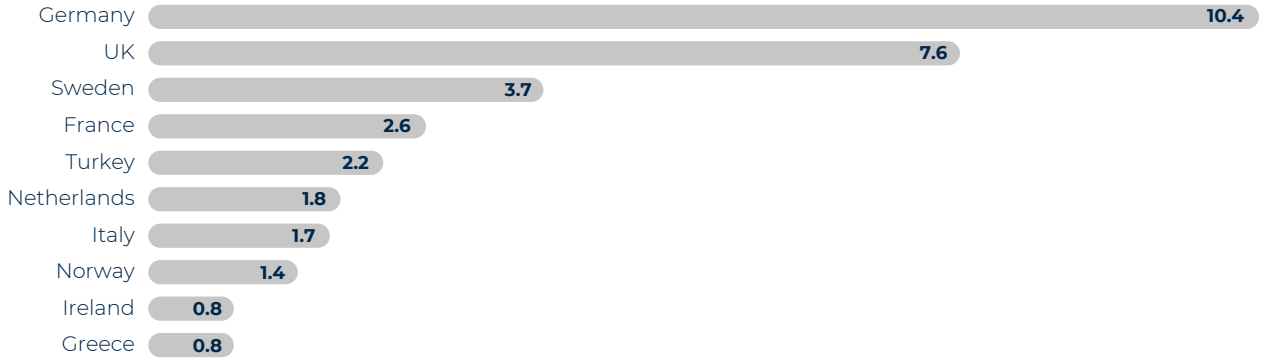
**Recommendation**

The global energy transition and the deployment of new renewable technologies, including batteries, is a major opportunity for European industry. EU industrial policy should facilitate the transition of EU industry by creating an investment-friendly environment and support global competitiveness as industry seeks to take advantage of these opportunities.

**New renewable energy investment around the world** (USD billions)




**The European countries that saw the largest investment in 2017** (USD billions)

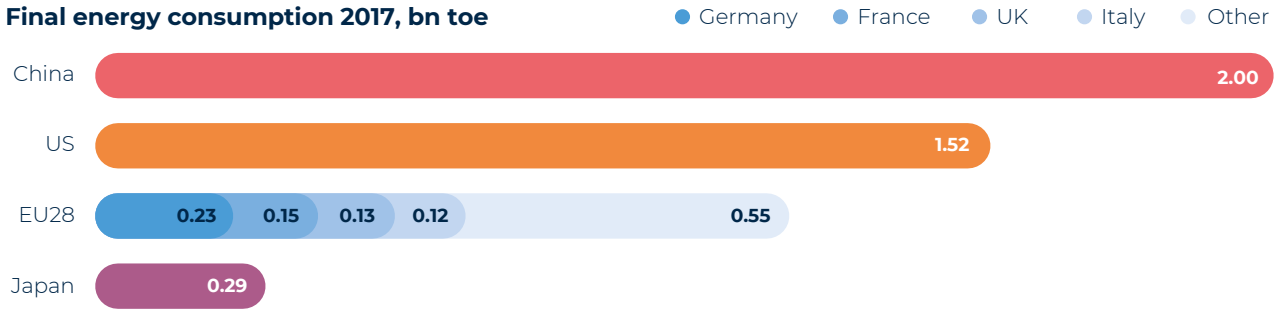


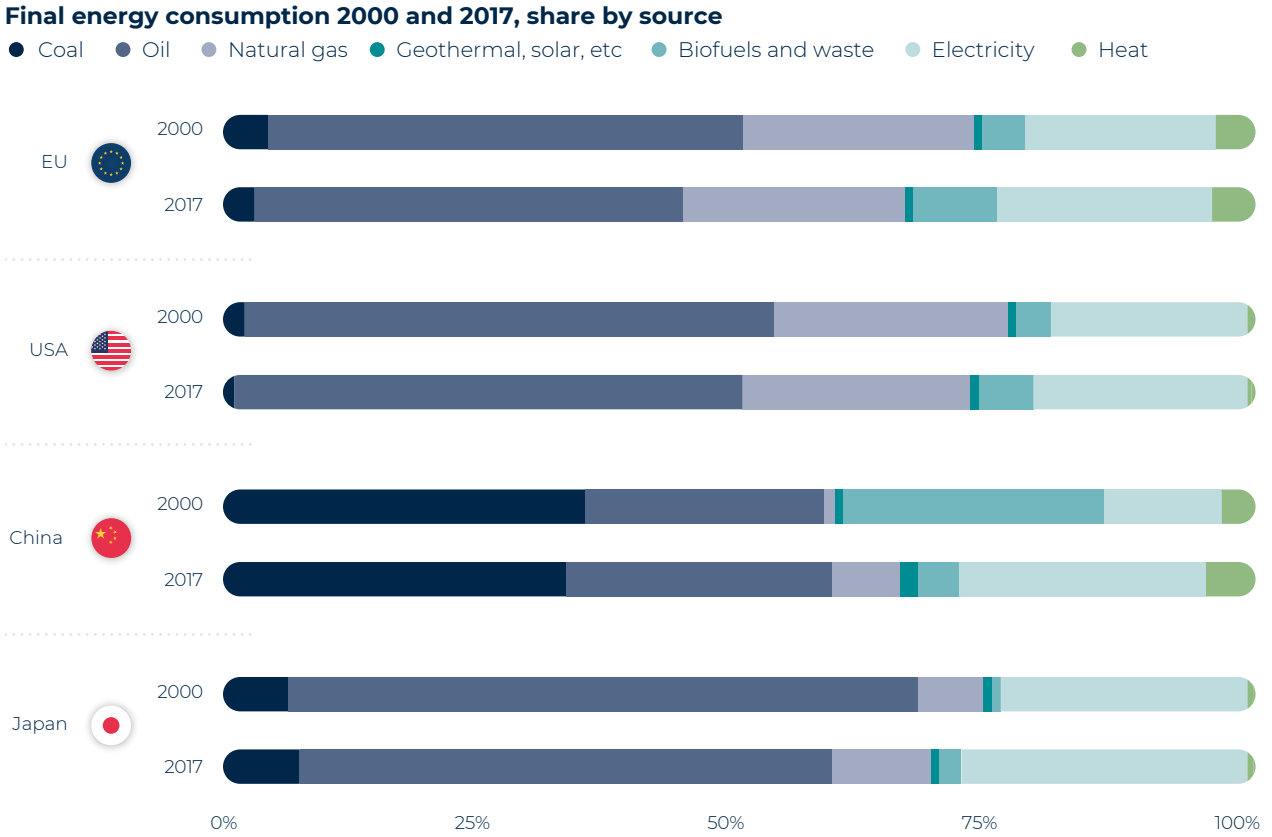

**Source:** UN Environment, Bloomberg New Energy Finance

# The energy mix is changing

**Observation**
The composition of final energy consumption is shifting towards more electricity and biofuels in the EU. China is also moving to electricity but remains heavily dependent on coal.

**Recommendation**
The EU should ensure a sufficient and competitive clean energy supply while enabling future energy markets to cope with this trend.




Source: IEA

# Trade & Investment

# The global trade outlook is uncertain

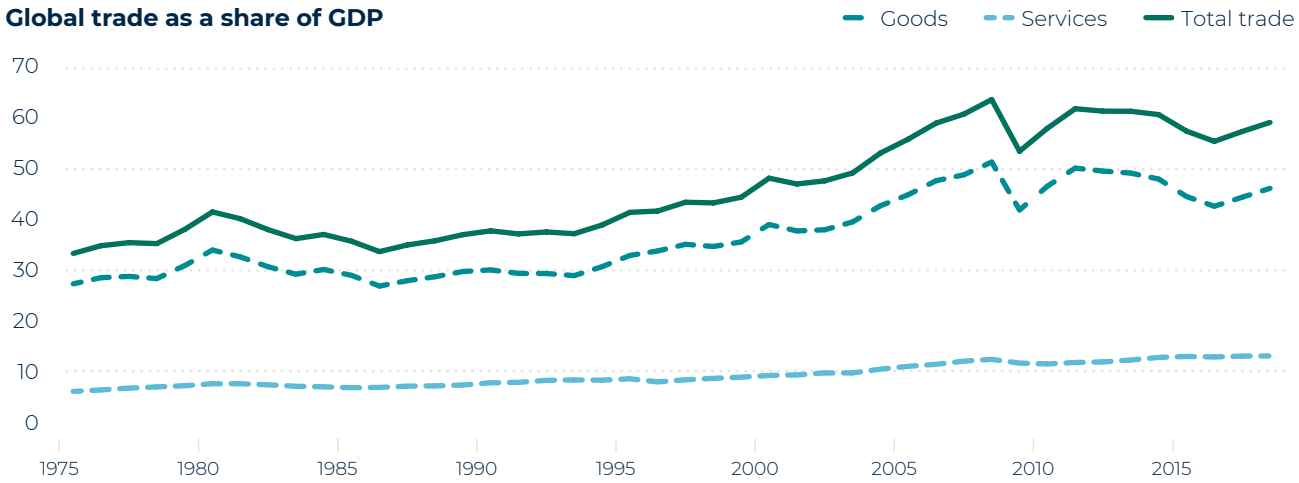
**Observation**

The period 1987-2007 saw a near doubling of the openness of the global economy to trade, but over the past ten years that trend has stopped, as goods trade, in particular, has become more volatile. Europe's share of global trade is declining.

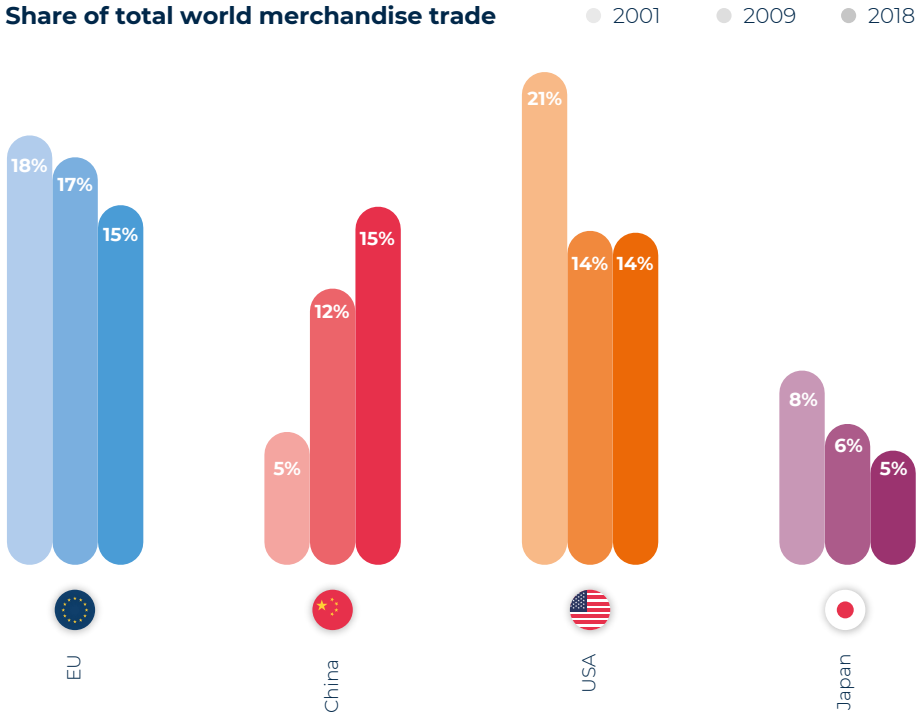
**Recommendation**

The EU should ensure free, fair and rules-based global trade. It should also help to address the key challenges the multilateral trading system is currently facing, touching on areas such as the WTO dispute settlement system, services, digital trade, investment, subsidies, competition and technology transfer.

**Global trade as a share of GDP**




**Share of total world merchandise trade**




Global trade as a share of GDP
**Source:** World Bank

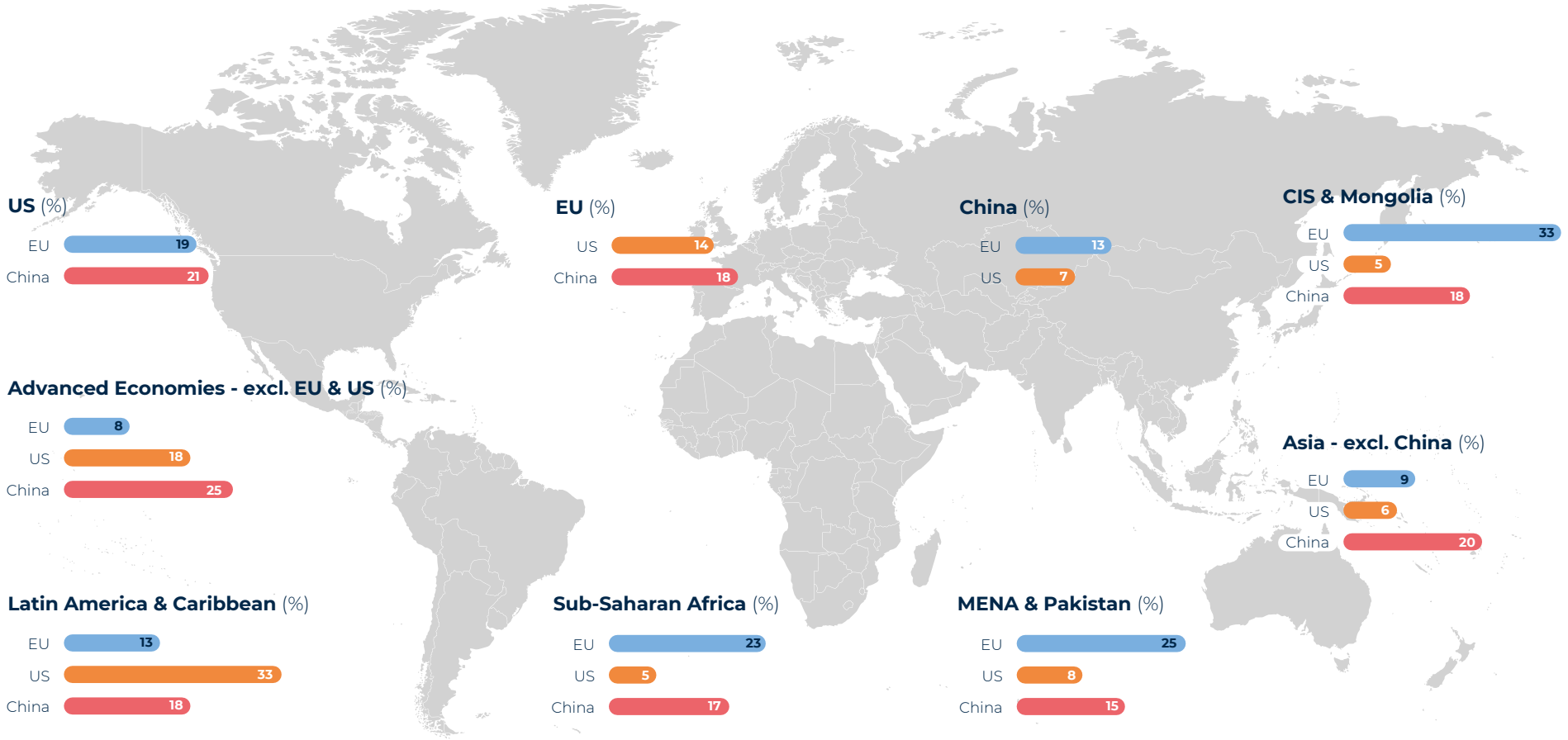
Share of total world merchandise trade
**Source:** WTO, Global Counsel calculations

# China is the largest source of imports for a significant number of countries

**Observation**
Chinese producers are increasingly competitive on international markets. It is not only the largest source of imports for many countries in the Asia-Pacific region as well as in Africa, it is now the largest source of imports into the EU and – tied with Europe – into the US.

**Recommendation**
The EU needs an active trade policy to strengthen the level playing field for European companies while simultaneously proactively advocating for European business interests in the face of geo-political and geo-economic challenges.

**Share of Imports from EU, US or China into international markets in 2018**




**Note:** Countries are shown in shaded when the difference in import shares from two regions is smaller than 3 percentage points of total goods imports.

**Sources:** IMF, Global Counsel calculations

# The transatlantic relationship is essential

**Observation**

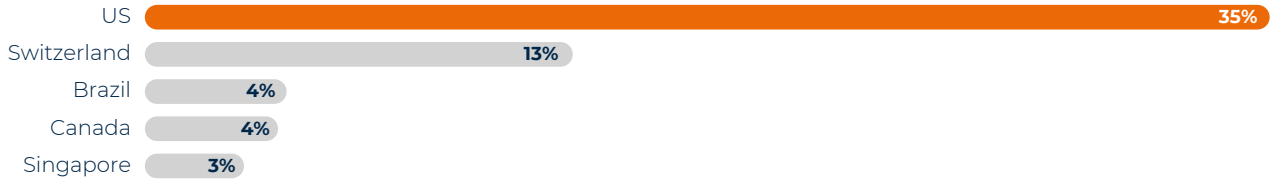
There is a strong mutual dependence among manufacturers on both sides of the Atlantic. The US remains the single most important trade and investment partner for the EU, with each highly dependent on the other as a source of investment, as an export market, and a source of intermediate inputs into production.

**Recommendation**

The EU and US should work together to further strengthen their trade and investment relationship. The ability to invest in production in each other's market and draw on transatlantic supply chains is essential for maintaining global competitiveness in all manufacturing sectors.

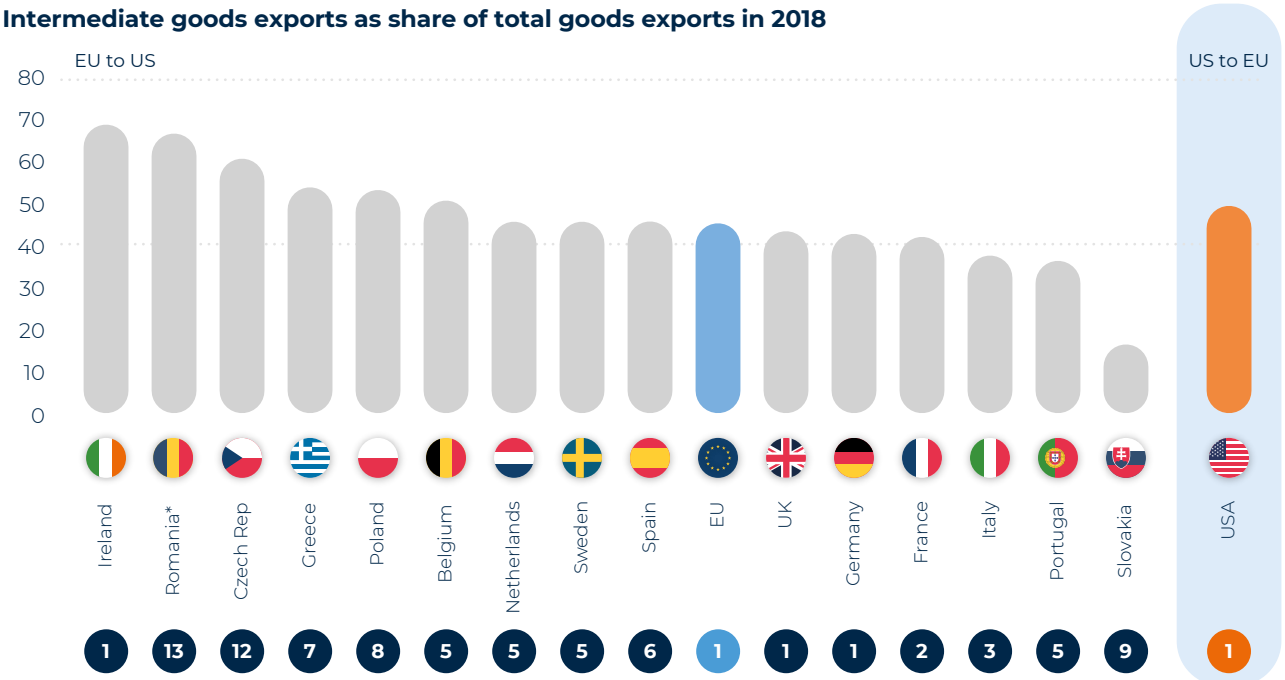
**The EU's top investment partners in 2017**

Share of total extra-EU outward FDI stock




Share of total extra-EU inward FDI stock


**Intermediate goods exports as share of total goods exports in 2018**




The EU's top investment partners in 2017
**Source:** Eurostat

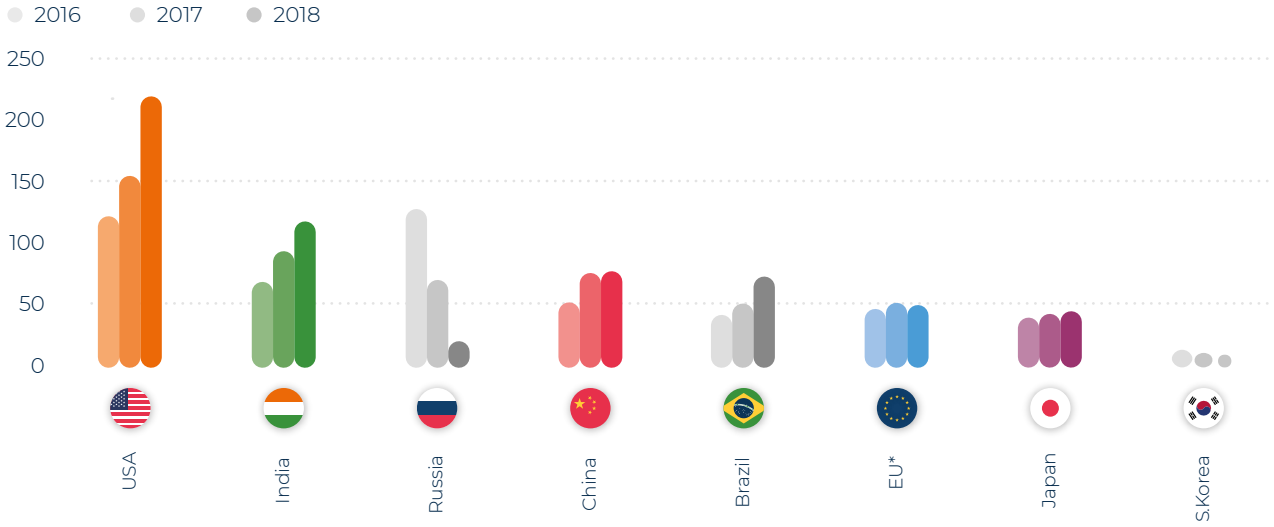
Intermediate goods exports as share of total goods exports in 2018
**Source:** OECD

# Protectionism is rising

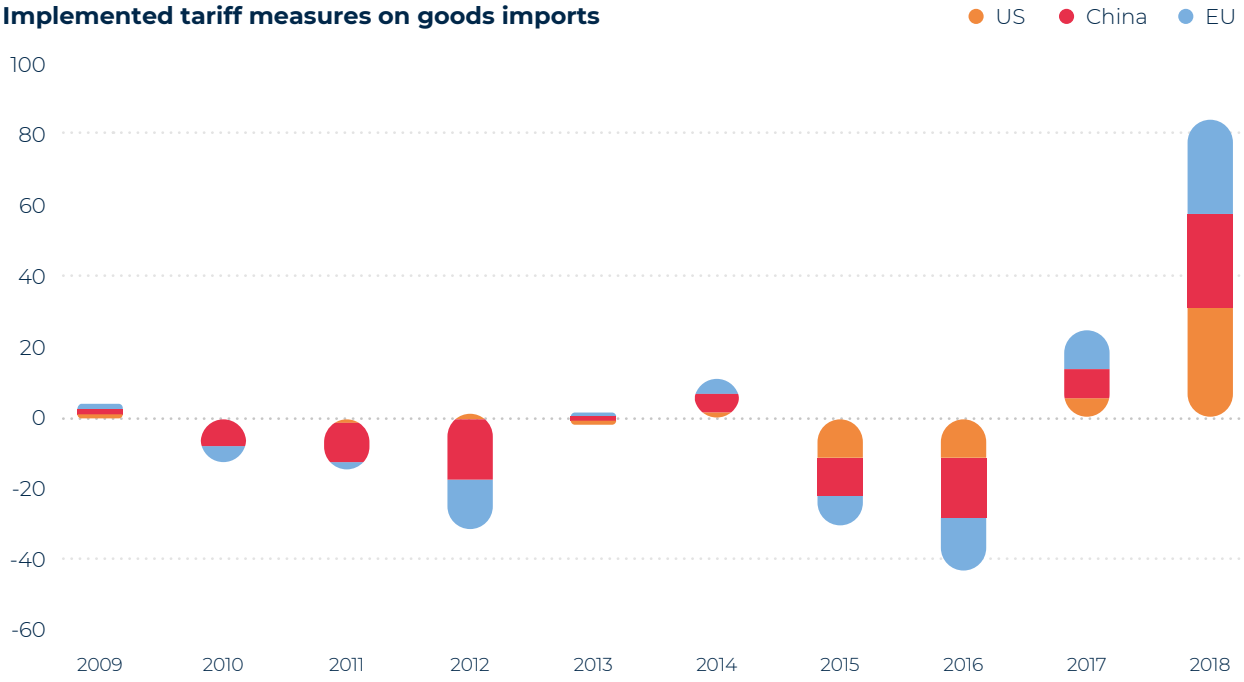
**Observation**
European economies remain among the most open in the world for trade in goods and in services. However, European companies face barriers to trade and investment in a wide range of advanced and emerging economies. Spiralling protectionism will end up harming all sides involved.

**Recommendation**
It is essential that the EU works with all other major economies, especially via the G20 and WTO, to reverse the trend towards protectionism seen in recent years and to open up each other's markets.

**Trade and investment barriers by number of discriminatory interventions imposed**




**Implemented tariff measures on goods imports**




Trade and investment barriers by number of discriminatory interventions imposed
**Note:** Showing EU Average
**Source:** Global Trade Alert

Implemented tariff measures on goods imports
**Source:** Global Trade Alert

# EU trade looks east and west

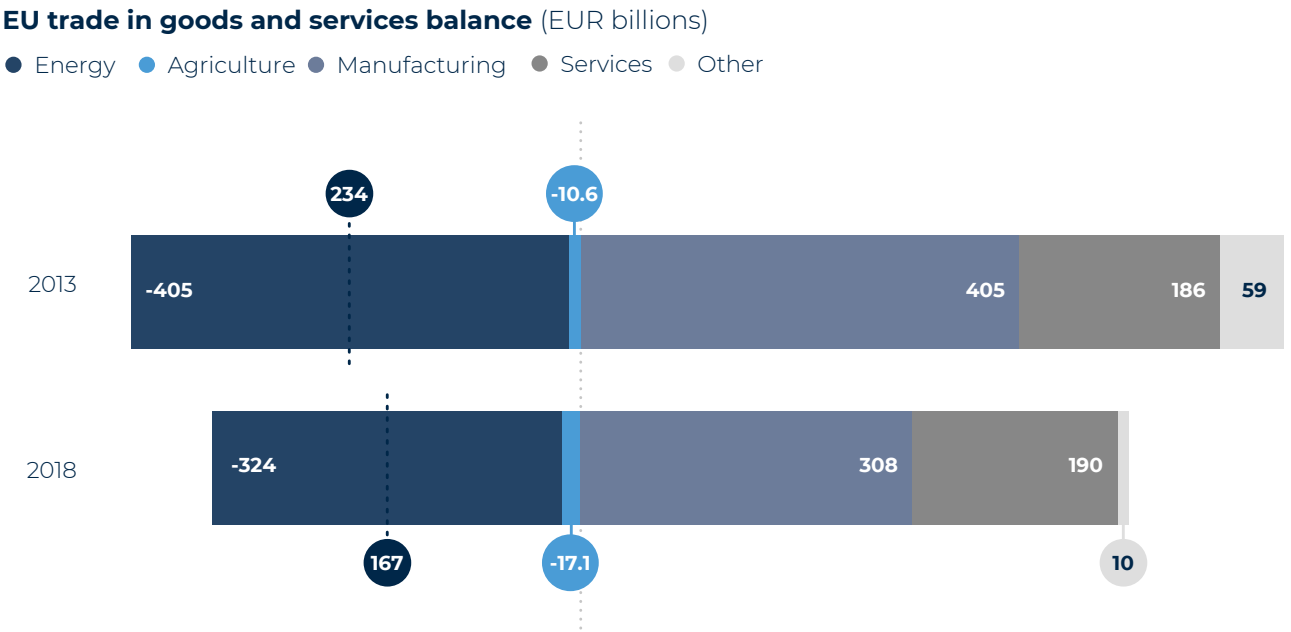
**Observation**

The EU's two biggest trade relationships are with China and the US. They are also the most unbalanced relationships, with the EU running a surplus with the US, but a deficit with China. Overall the EU enjoys a surplus in manufacturing and services, with a deficit in energy.

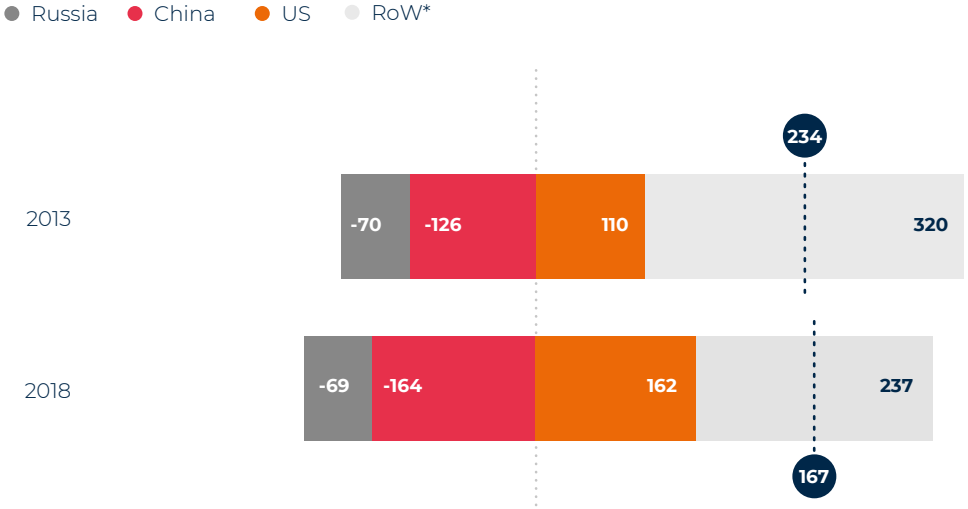
**Recommendation**

Europe has a largely healthy set of bilateral trade relationships, with a combination of surpluses and deficits that mostly reflects relative consumption preferences and production strengths. The EU should pursue and enforce ambitious trade and/or investment negotiations with major economies like the US, China and other emerging market economies.

**EU trade in goods and services balance** (EUR billions)




**EU trade in goods and services balance** (EUR billions)




**Note:** * Rest of the World
**Source:** Eurostat

# Fair competition between the EU and China requires a level playing field

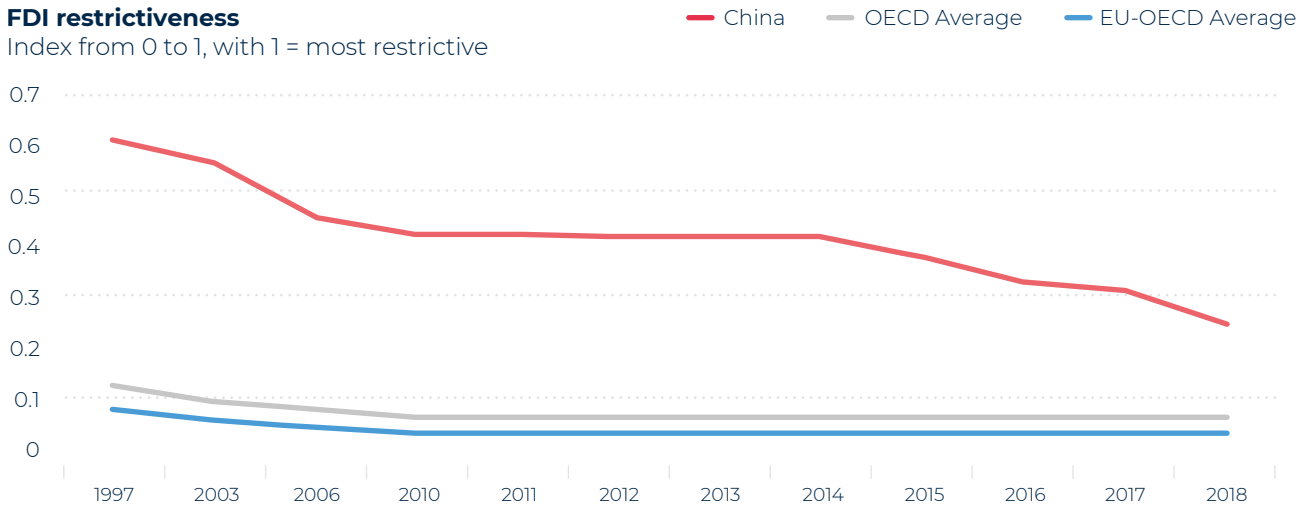
## Observation

The rise in Chinese outward foreign direct investment (FDI) in the EU brings many benefits for Europe. At the same time, the state's involvement in many of them poses the risk that China might be exploiting the EU's openness while foreign investors continue to face many restrictions in China. The competition extends beyond FDI.

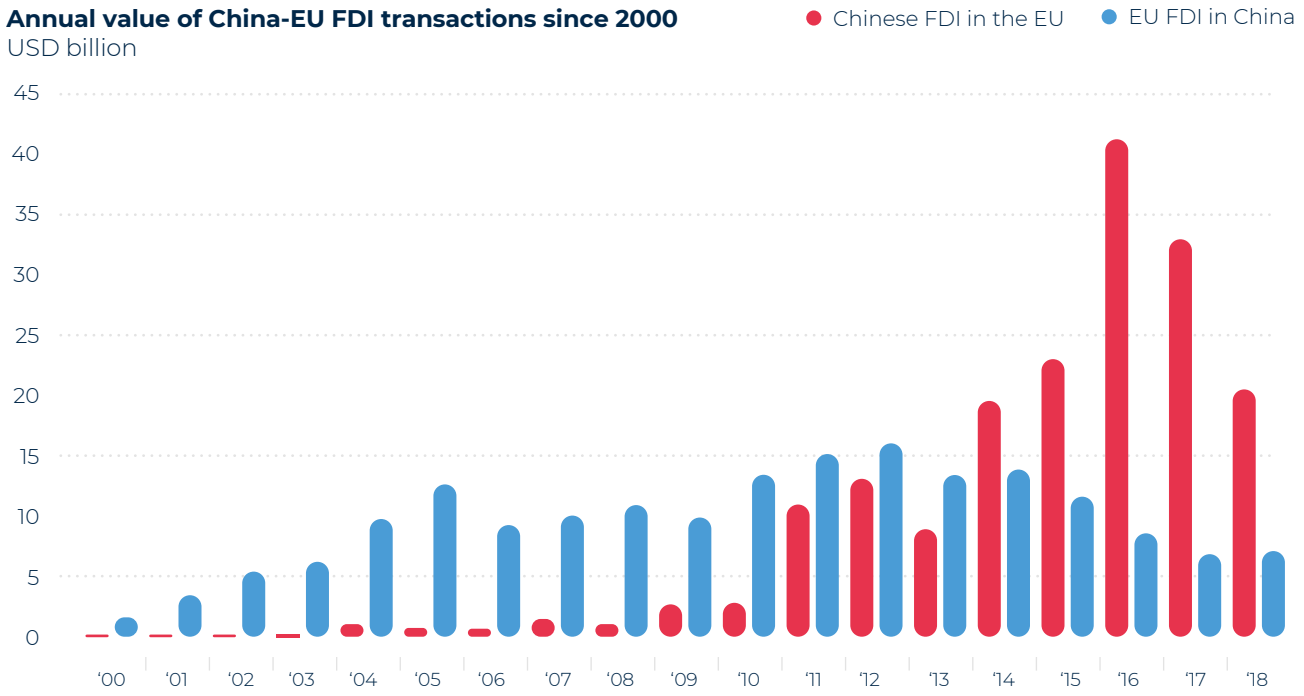
## Recommendation

European policymakers need to ensure a level playing field with China in terms of market access and regulatory treatment and protect key European interests, including through a transparent and targeted FDI screening mechanism. The EU and Member States should remain open to FDI that complies with common market rules, while implementing effective national FDI screening mechanisms based on the new EU framework. The EU should accelerate the negotiation of the EU-China investment agreement. Distortions of a level playing field should also be tackled through efficient and effective use of the EU's modernised Trade Defence Instruments and possibly new measures aiming at reciprocity to open Chinese markets for European companies (such as the International Procurement Instrument).

**FDI restrictiveness**
Index from 0 to 1, with 1 = most restrictive




**Annual value of China-EU FDI transactions since 2000**
USD billion




**FDI restrictiveness - Source:** OECD

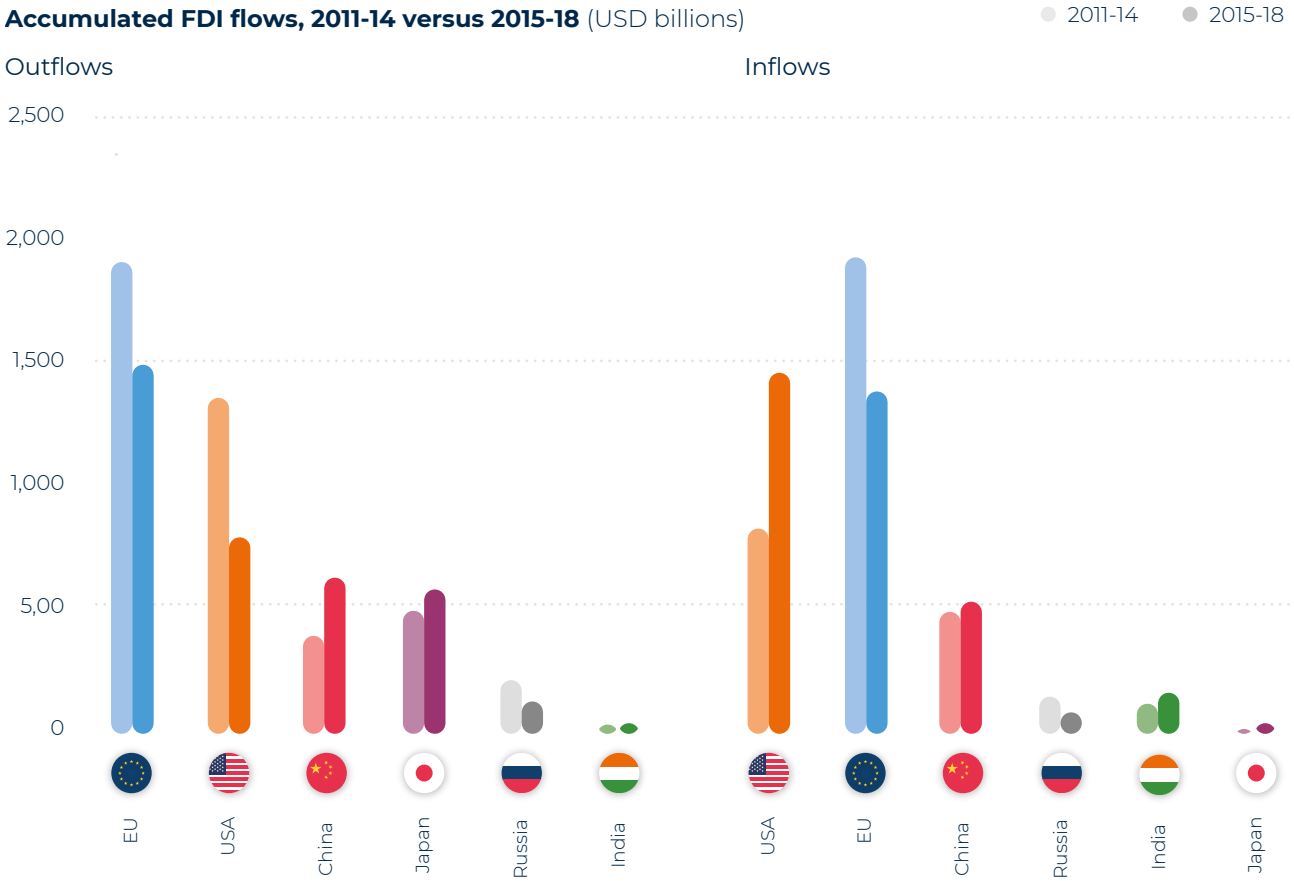
**Cumulative value of China-EU FDI transactions since 2000**
**Source:** Rhodium Group. Data represents the combined value of direct investment transactions by mainland Chinese companies, including greenfield projects and acquisitions that result in significant ownership control (>10% of equity).

# EU leadership in FDI is being challenged

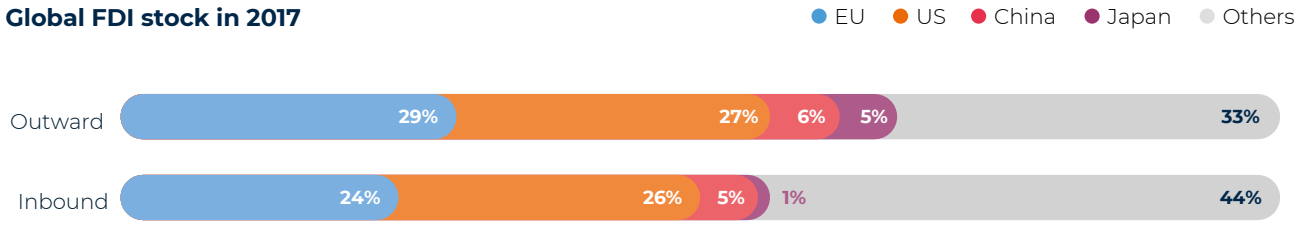
**Observation**
The EU remains the single most important region for both outward and inward foreign direct investment, but increasingly it is Asia and the rest of the world that account for the bigger share of flows. The EU's share has declined in recent years and its leadership in this area is under threat.

**Recommendation**
It is essential for European industry that the EU remains competitive as a destination - and a source - for direct investment. Bilateral investment treaties and/or strong investment chapters in future free trade agreements should be a priority, supplemented by the EU's economic diplomacy promoting European industrial interests.

**Accumulated FDI flows, 2011-14 versus 2015-18** (USD billions)




**Global FDI stock in 2017**




**Note:** Without intra-EU FDI
**Source**: UNCTAD, Eurostat, CEIC Data, Global Counsel calculations

# FDI supports jobs

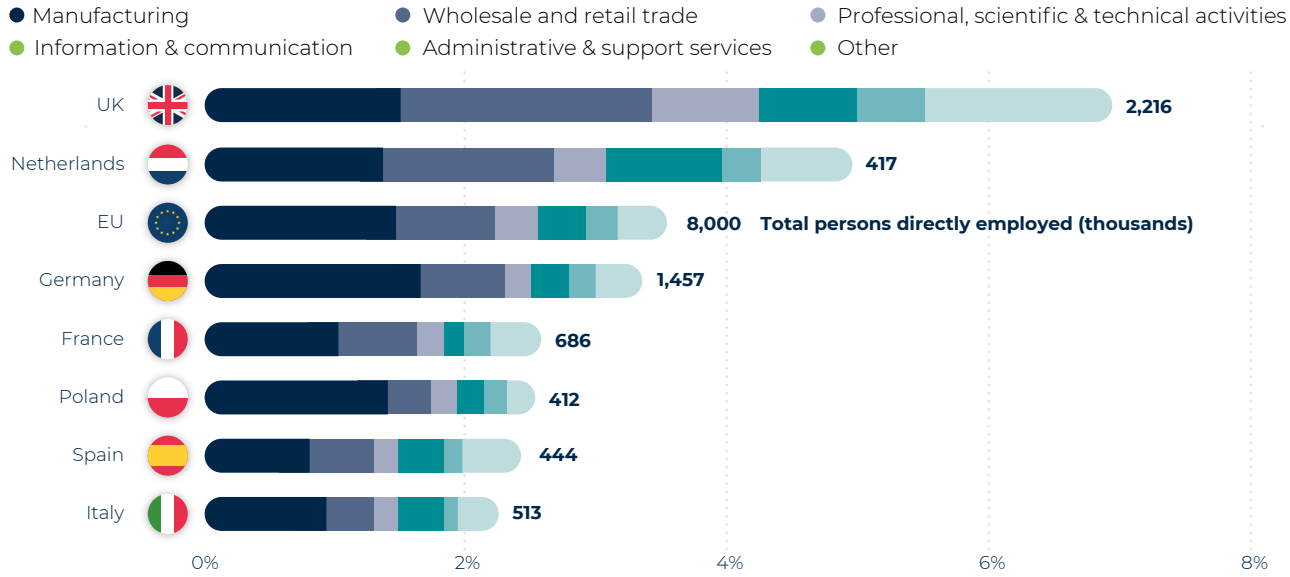
**Observation**

Foreign investment supports jobs, both in Europe and around the world. Foreign investors from outside the EU have created eight million jobs in the Union, while EU investment has created over three million American jobs.

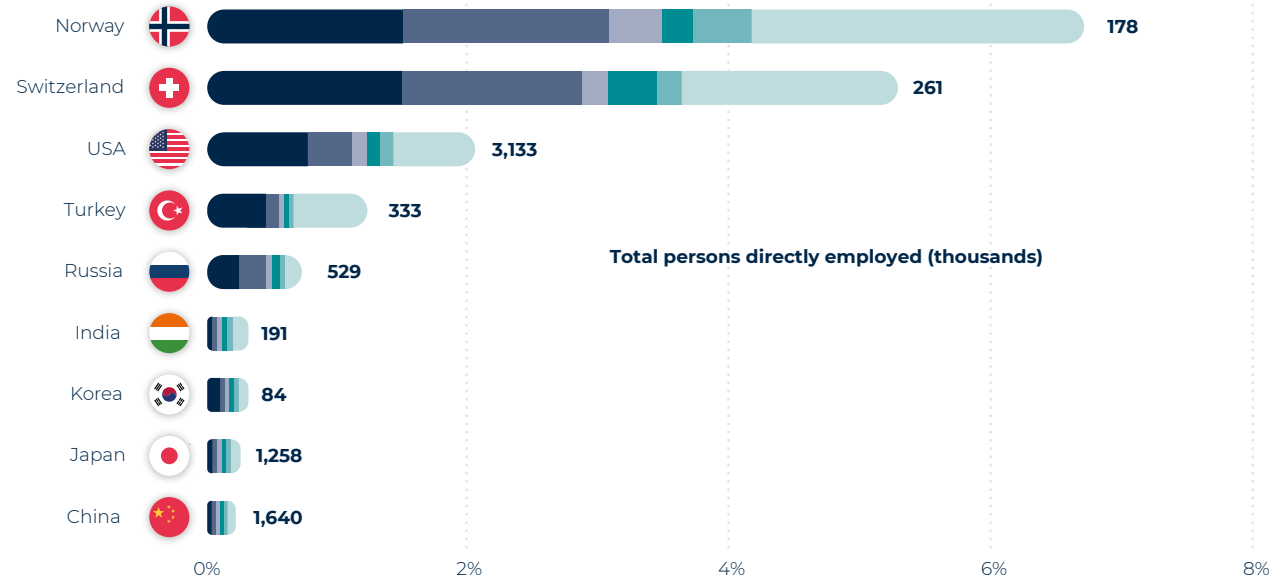
**Recommendation**

Politicians in the EU, the US, and elsewhere, must continue to make a strong case for openness to foreign investment - and fair and equal treatment for foreign investors - because it supports jobs, makes businesses more competitive, and benefits consumers.

**Direct employment in the EU and Member States by foreign, non-EU controlled companies, 2016**




**Direct employment outside the EU by affiliates of EU enterprises, 2016**




**Source:** Eurostat, IMF, Global Counsel calculations

# Benchmarking report 2019 bibliography

## Reports


**Arthur D Little, The Race to 5G, March 2019** https://www.adlittle.com/sites/default/files/reports/adl_the_race_to_5g_report_-min.pdf

**Bertelsmann Stiftung & United Nations Sustainable Development Solutions Network (UNSDSN), Sustainable Development Report** 2019, https://s3.amazonaws.com/sustainabledevelopment.report/2019/2019_sustainable_development_report.pdf

**British Petroleum, Statistical Review of World Energy 2019** https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2019-full-report.pdf

**Center for Data Innovation, Who is Winning the AI Race: China, the EU or the United States?** August 2019, http://www2.datainno-vation.org/2019-china-eu-us-ai.pdf

**Directorate-General for Trade, DG Trade Statistical Guide, July 2019** http://trade.ec.europa.eu/doclib/docs/2013/may/tradoc_151348.pdf

**European Commission, Energy Prices and Costs in Europe, January 2019** https://ec.europa.eu/energy/sites/ener/files/documents/swd_-_v5_text_6_-_part_1_of_4.pdf

**Edelman, 2019 Edelman Trust Barometer** https://www.edelman.com/sites/g/files/aatuss191/files/2019-04/2019_Edelman_Trust_Barometer_Technology_Report_0.pdf

**European Political Strategy Centre, EU Industrial Policy After Siemens-Alstom: Finding a new balance between openness and protection, March 2019** https://ec.europa.eu/epsc/sites/epsc/files/epsc_industrial-policy.pdf

**European Telecommunications Network Operations' Association, The State of Digital Communications 2019: Ideas, Facts and Figures on the Sector**, https://etno.eu/datas/publications/annual-reports/ETNO%20Annual%20Economic%20Report%202019%20final%20web.pdf

**European Telecommunications Network Operations' Association, Annual Economic Report 2017** https://etno.eu/datas/publications/annual-reports/ETNO%20Annual%20Economic%20Report%202017%20(final%20version%20web).pdf

**Frankfurt School,United Nations Environment Programme Collaborating Centre for Climate & Sustainable Energy Finance and Bloomberg New Energy Finance, Global Trends in Renewable Energy Investment 2018** http://www.iberglobal.com/files/2018/renewable_trends.pdf

**IBM & Ponemon Institute, 2019 Cost of a Data Breach Report** https://www.all-about-security.de/fileadmin/micropages/Fachartikel_28/2019_Cost_of_a_Data_Breach_Report_final.pdf

**International Energy Agency, Global Electric Vehicle Outlook 2019** https://webstore.iea.org/download/direct/2807?fileName=Global_EV_Outlook_2019.pdf

**International Monetary Fund, World Economic Outlook October 2019** file:///C:/Users/jens.presthus/Downloads/text%20(12).pdf

**International Telecommunication Union, Global Cybersecurity Index 2018** https://www.itu.int/en/ITU-D/Cybersecurity/Documents/draft-18-00706_Global-Cybersecurity-Index-EV5_print_2.pdf

**KPMG Enterprise, Venture Pulse Q4 2018, January 2019** https://assets.kpmg/content/dam/kpmg/xx/pdf/2019/01/kpmg-venture-pulse-q4-2018.pdf

**Mercator Institute for China Studies & Rhodium Group, EU-China FDI: Working Towards Reciprocity in Investment Relations, May 2018**, https://www.merics.org/sites/default/files/2018-08/180723_MERICS-COFDI-Update_final.pdf

**OECD, Economic Outlook May 2019** https://www.oecd-ilibrary.org/sites/b2e897b0-en/1/2/2/index.html?itemId=/content/publication/b2e897b0-en&csp_=d2743ede274dd564946a04fc1f43d5dc&itemIGO=oecd&itemContentType=book

**United Nations Industrial Development Organization (UNIDO), Competitive Industrial Performance Report 2018** https://www.unido.org/sites/default/files/files/2019-05/CIP.pdf


## Websites and databases


Ameco (macro database of European Union)

Bank of International Settlements

Bloomberg New Energy Finance

CB Insights

CEIC

CSIS, Significant Cyber Incidents

EgonZehnder, Global Board Diversity Tracker 2018

Eurostat

Fortune

Global Trade Alert

International Energy Agency

International Monetary Fund

International Renewable Energy Agency

Organisation for Economic Co-operation and Development

The Conference Board

UK Department for Business, Energy and Industrial Strategy

United Nations Conference on Trade and Development

United Nations Department of Economic and Social Affairs (UNDESA)

United Nations Environment Programme

World Bank & Ecofys, Carbon Pricing Watch 2019, February 2019

World Economic Forum

World Trade Organization

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