



Industrial policy in times of COVID-19 and its aftermath

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The COVID-19 pandemic is expected to throw the world economy into the deepest recession since World War II. While Europe is anticipated to recover rapidly from this year's recession, its long-term economic perspectives are subdued not only relative to China and other major EMs but also in comparison to the US.

Already before the pandemic, Europe was confronted with a rapidly changing global economic, political and technological landscape. The urgency to act together and preserve Europe's prosperity and competitive edge for future generations has risen further through the crisis. The structural challenges ahead, with technological and climate change at the forefront, are so substantial that they can hardly be met at the member level alone.

In its industrial policy strategy, the European Commission has merged the goal of reinforcing Europe's industrial sovereignty and global competitiveness with its overarching objective: the twin transition to a green and digital economy. The Commission's strategy to address these issues in an integrated way is a crucial step in formulating a joint European response to some of the most formidable economic and geopolitical challenges of the next decades.

Close cooperation between the industry, governments and academia is necessary to meet these ambitions and open questions regarding the realisation and compatibility of the policy objectives need to be addressed along the way. For the transition to carbon-neutrality by 2050, it remains to be seen whether agreed instruments such as the Carbon Border Adjustment Mechanism and Just Transition Mechanism will suffice to compensate for increased global competitive pressure if other major blocs do not follow suit on the Paris agreement. For the digital transition, a network approach to the digital industry, as presented in the strategy, certainly fits the setup and requirements of the single market much better than the creation of European champions. At the same time, the (further) development of (existing) industry clusters should be explicitly supported rather than aiming at a one speed development across regions. On sovereignty and competitiveness, rapid implementation of updated regulation and close cooperation between members are key to protect the EU27 against unfair competition and transfer of intellectual capital.

During the pandemic the role of the state in the EU economies has strengthened substantially. Hot political debates about normalising the market mechanism and reinstating state aid rules can be expected over the next years. Risks are that even post-COVID, there might be calls for continued exemptions to the European state aid and competition rules. This could lead to lasting distortions of the single market.



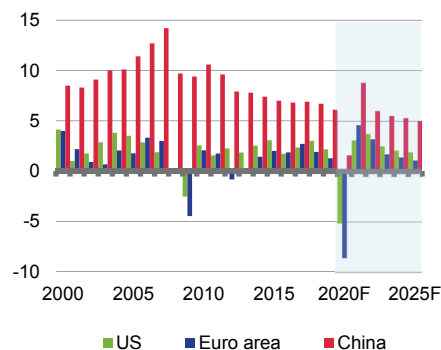
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Facing the severest recession since World War II

Demographics weigh on medium-term EU growth perspectives

1

Real GDP, % yoy



Sources: National authorities, Deutsche Bank

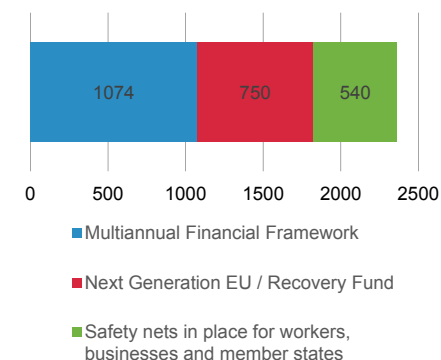
Those who thought the 2008 financial crisis and its aftermath could hardly be topped in economic severity were proven wrong this year. The COVID pandemic is expected to throw the world economy into the deepest recession since World War II (DB forecast: -4.1% yoy). The pain will be spread unevenly, with a severe recession of -8.6% yoy projected for the euro area, -5.2% for the US and positive but strongly reduced growth of 1.6% in China. Next year the world economy is expected to rebound by 4.9%. It will stabilise below pre-crisis trends due to a combination of factors including demographics, fiscal fallout of the crisis, and ongoing US-China trade and technology tensions.¹

While Europe is anticipated to recover rapidly from this year's recession, its long-term economic perspectives are subdued not only relative to China and other major EMs but also in comparison to the US (Chart 1). To some extent, this reflects differences in demographic trends and productivity. But here the increasing technological gap also comes into play. The speed of recovery from the COVID-19 pandemic might also be a determining factor for the relative economic performance of global competitors for years to come. Already now, it has deepened the tensions between the incumbent and rising economic superpowers – the US and China.²

The EU's 2 trillion recovery package

2

Recovery Plan for Europe, EUR bn



Sources: European Commission, European Council

Even before the pandemic Europe was confronted with a rapidly changing global economic, political and technological landscape. The urgency to act together and protect Europe's prosperity and competitive edge for future generations has risen substantially through the outbreak of the crisis. Calls for a coordinated and holistic European policy approach became louder. In March, the European Commission released a new European industrial policy strategy followed by a White Paper on foreign subsidies.

In July, European leaders agreed on an unprecedented EUR 750 bn crisis recovery package, on top of a EUR 1.074 trillion EU budget over the next seven years and the earlier EUR 540 bn crisis package (ESM pandemic crisis support, EIB guarantee fund, SURE). This brings the EU's total fiscal response to the crisis to EUR 2.364 trillion (Chart 2). The focus of these measures is to mitigate the immediate impact of the crisis on the EU's economy and social fabric. Put in a longer perspective, these measures will help to protect against the damage caused by the pandemic to the EU's economic base and to speed up its recovery. In that sense, the crisis measures are a clear supplement to the EU's medium- to long-term approach, manifested in its industrial policy strategy.

The pandemic revived and to some extent sharpened the debate about what industrial policy should – and could provide. More specifically, the old debate about interventionism and protectionism versus regulation and structural investment gained new momentum. In Europe, where the rules of the single market – under normal circumstances – strongly constrain the scope of member states to directly support their industry, this is a particularly complex issue.

A renaissance of industrial policy

In Europe the pandemic has sharpened the urgency to defend the bloc's global position against a rapid economic and geopolitical transformation. Already before the outbreak, it had become increasingly clear that the EU runs the risk

¹ Hooper, Peter (et al.) (2020). World outlook: Interim update and longer term projections. Special Report. Deutsche Bank Research. August 5.

² Böttcher, Barbara; Körner, Kevin (2020). COVID-19 – a paradigm change for geopolitics? Focus Europe. Deutsche Bank Research. May 4.



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of falling irrevocably behind in a global race for technology leadership, with serious implications for its competitiveness and long-term prosperity.³

In the late 20th century, economic policy in the EU was primarily guided by the belief that global market forces would (in most cases) deliver the best economic results and most efficient allocation of resources, with a relatively limited role of the government. The economic integration through the single market and introduction of the euro made (interventionist) industrial policy at the national level a particularly sensitive issue. EU competition law strongly limited the scope for national state aid, with a view to the potential distortive impact of national efforts to promote and protect their own industries on the bloc's single market. Aggregate spending on subsidies in the EU is estimated to have declined from 3% of GDP in the 1970s to around 2% of GDP in 1980, whereas total EU spending on industrial policy (MFF and member states) in 2014-2017 averaged at 1.1% of GDP, according to the wiiw.⁴

But not only since the outbreak of COVID-19, there has been a growing perception among European leaders that for several aspects regarding the ongoing economic and technological transformation, market forces alone might not be sufficient to ensure that Europe stays afloat of the current.

In the 2000s, calls for stronger regulatory efforts as well as direct government intervention have become louder. The outbreak of the COVID-19 virus and the severe impact on the bloc's economies finally shifted the tide towards a more prominent role of the state in the economy. Industrial policy, previously sidelined in Western market economies, once again has become en vogue. Various factors contributed to this shift of perspective on economic policy, both among political leaders and many academics:

- Globally, the belief in the corrective mechanism of markets was shaken by the 2008/2009 financial crisis and its aftermath.
- In Europe, several countries in particular in the bloc's south experienced a long and painful recovery and have been on weak growth trajectories ever since, if not already before.
- The impact of technological change and digital transformation on the EU industries and broader economies has become more visible, as has become the realisation that Europe seems to fall behind in key technological fields, risking its long-term competitiveness and prosperity.
- The need to mitigate climate change poses an unprecedented challenge to Europe's industrial economies, the transition towards green economies requires a concerted and socio-economically challenging transformation.
- Shifts in global economic (and geopolitical) balances have illustrated Europe's economic vulnerabilities, while the rise of China as a "strategic rival" in key industries and technologies and the success of its state capitalist economic model are major challenges to the EU's own perception as innovative and efficient high-tech economy.
- EU leaders were called upon to respond to the severe impact of COVID-19 on EU economies and the need to address growth and development prospects in the EU for the post-COVID years.
- The dependencies on global value chains and imports of essential goods (in particular health care equipment) as well as the trade war of the last couple of years led to reconsiderations of the preferred degree of global economic integration and strengthened the belief among EU leaders that strategic

³ Körner, Kevin (2020). (How) will the EU become an AI superstar? EU Monitor. Deutsche Bank Research. March 18.

⁴ Landesmann, Michael; Stöllinger, Roman (2020). The European Union's Industrial Policy: What are the Main Challenges? The Vienna Institute for International Economic Studies (wiiw).



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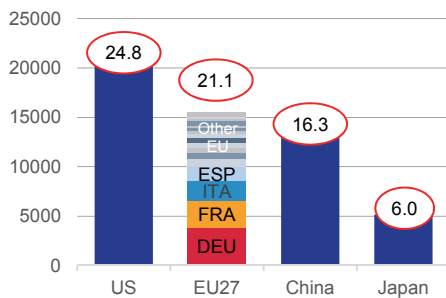
independence and technological sovereignty should become political priorities.

Wanted: A joint European approach to industrial policy

Fragmented European economy

3

2017 GDP, nominal, USD bn (% share of world)



Sources: IMF, Deutsche Bank Research

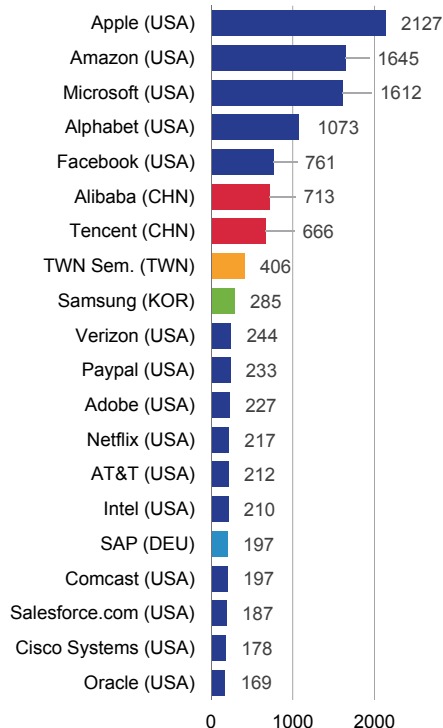
While EU leaders agree that Europe risks falling behind in the rapidly changing global political and economic landscapes, views on the adequate response to these challenges diverge between the EU's capitals. Over the last years, EU governments came up with a variety of strategy papers, some of them sector or technology-specific, others with a broad and long-term industrial and economic perspective.

Pre-COVID estimates show that expenditures on industrial policy at the national level still exceed the EU level substantially. For 2014-2017 member states spent an average of 0.75% of GDP (including 0.1% of GDP co-financing with the EU). This compares to industrial policy spending of 0.35% of GDP in the EU's MFF, according to a wiiw policy note.⁵ In the author's view, this shows that industrial policy is still a shared competence between the EU and its member states, with the members in the lead. However, they also identify a structural change away from "hard" interventionist policies of the past towards more "soft" policies that are more in line with the market forces. In this area, where it is mainly about regulation, the EU takes centre stage, whether it is competition or trade policy.

Companies from the US dominate the technology sector

4

Market cap, USD bn



Note: Market capitalisation as per August 24, 2020

Source: Bloomberg Finance LP

The scope for national industrial policies is rather limited, given the size of EU member's individual economies compared to their global competitors and the constraints for industrial policy under EU law. While the EU27 as a whole economically still plays in the same league as the US and China, even the blocs' largest members – Germany and France – by themselves, are dwarfed by the two economic superpowers (see chart 3). This was emphasised in a Franco-German "manifesto" of 2019, which made clear that Europe "must pool its strengths" and develop a "genuine European industrial policy strategy" if it wants to remain a "manufacturing powerhouse in 2030".⁶

In particular in the digital economy, the EU is increasingly at risk of being left behind. This is most vividly illustrated by looking at the largest tech companies globally. Among the top 20 there is just one from Europe, compared to 15 from the US and 2 from China (Chart 4). But it can also be shown that this dramatic shift of regional weights in global markets is not limited to the tech industry. Taking a broader look at global stock markets over the last few decades provides a similar image. Among the largest 500 companies based on market capitalisation, the share of European companies compared to the US and China shrank visibly between 2000 and 2020 (Chart 5). Most importantly, the US and China substantially outperform Europe when it comes to "newcomers", i.e. companies that were not listed in 2000 (Charts 5 and 6).

The message behind these numbers is a disquieting one: among the largest companies Europe increasingly lives from the successes of the 20th century. One could counter that the composition of the European economy (smaller companies, 99% SMEs) and its financing (less equity) is different from the US (and China). Maybe these numbers should not be over-interpreted. Still, when it comes to innovation and technological leadership size and market share are crucial factors.

⁵ Landesmann, M. and Stöllinger, R. (2020). The European Union's Industrial Policy: What are the Main Challenges? The Vienna Institute for International Economic Studies (wiiw).

⁶ BMWi and MINEFI (2019). A Franco-German Manifesto for a European industrial policy fit for the 21st century.



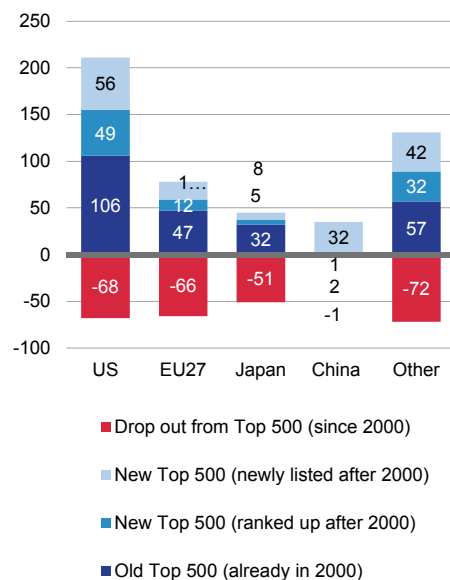
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A new industrial strategy for Europe

Europe's largest companies – mainly from the 20th century

5

Number of companies among Top 500 in 2020, breakdown of composition, #

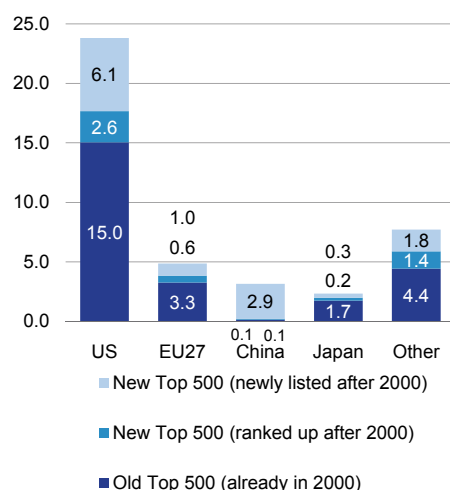


Sources: Thomson Reuters Datastream, Deutsche Bank Research

US strongly dominates among largest companies, China catches up

6

Market capitalisation of Top 500 in 2020, breakdown of composition, USD trillion



Sources: Thomson Reuters Datastream, Deutsche Bank Research

The structural challenges that need to be addressed, with technological and climate change at the forefront, are so substantial that they can hardly be met at the member level alone.

Coordination of industrial and innovation policy at the EU level becomes increasingly important, both with view to competition in the single market as well as scale of action required. In 2019, EU leaders called on the Commission to come up with a proposal for a new European industrial policy. The Commission published their strategy in March 2020, just as the pandemic started to spread globally.⁷ The proposed strategy basically merges the objective of reinforcing Europe's industrial sovereignty and global competitiveness with the two overarching objectives of the von der Leyen Commission: the transition towards a climate-neutral economy by 2050 and catching up in the global digital race.

Key objectives of the strategy:

- **Green transition.** Creating a green economy and supporting the industry in its leading role in the European Green Deal⁸: First, this includes the support of specific sectors, i.e. the energy-intensive sector, chemical production, construction, smart mobility and renewable energy. Second, it comprises policy changes based on the EC's 'Circular Economy Action Plan'⁹ such as a new 'sustainable product policy framework' or a green procurement.
- **Digital transition.** The strategy aims at a globally leading role in the digital economy, supported by the Commission's AI and data strategies. The approach aims at fully exploiting the potential of the digital single market and data pool and by speeding up investment in key enabling technologies. Bolstering the EU's critical digital infrastructure and the rollout of 5G are seen as core elements of the successful digital transition.¹⁰
- **Global competitiveness and sovereignty.** Strengthening competitiveness and secure a world-leading industry by reinforcing the single market, upholding open markets and fostering a global level playing field. It includes also the revision of the competition framework by October 2020. It further includes the reinforcement of Europe's industrial autonomy which includes investments in cybersecurity and the prioritised promotion of critical digital infrastructure, key technologies as well as the defence and space sector. It also focuses on skills and an educated workforce as the backbone of a competitive industry (e.g. "European Pact for Skills" and "European Education Area").

Financing of these measures is linked to the various EU programmes and funds in the EU's next seven year budget that were agreed on in the July Council meeting, including Horizon Europe, InvestEU, the European Defence Fund, the European Social Fund and the Structural and Investment Funds.

In addition, the European Commission strives for an increased joint financing by private actors and member states, supported by public-private partnerships in Horizon Europe. In particular, it considers to strengthen the instrument of 'Important Projects of Common European Interest' (IPCEIs) which allows member states to pool financial resources.

⁷ European Commission (2020). A New Industrial Strategy for Europe.

⁸ European Commission (2019). The European Green Deal.

⁹ European Commission (2020). A new Circular Economy Action Plan for a cleaner and more competitive Europe.

¹⁰ European Commission (2020). Shaping Europe's digital future. European Commission (2020). A European Strategy for Data.



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European Industrial Ecosystems should bring together key players from academia, research institutes, service providers, large companies, SMEs and public authorities. New industrial alliances are and will be launched to support the policy objectives in a coordinated manner, including the European Clean Hydrogen Alliance, Alliance on Low Carbon Industries, Industrial Clouds and Platforms as well as an alliance on Raw Materials.

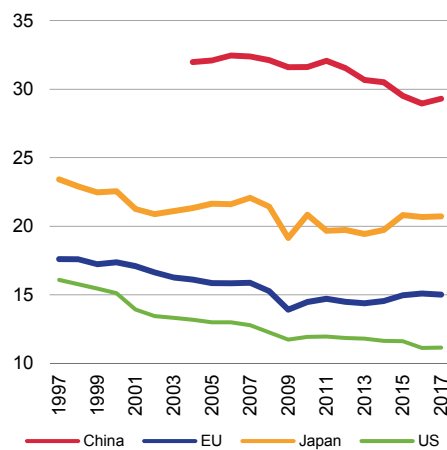
The industrial policy strategy is supported by a strategy for SMEs as key players for innovation and for the twin objective of green and digital transition.¹¹

Industrial policy – just about the industry?

EU – economic share of industry in mid-range

7

Manufacturing, value added % of GDP



Source: World Bank

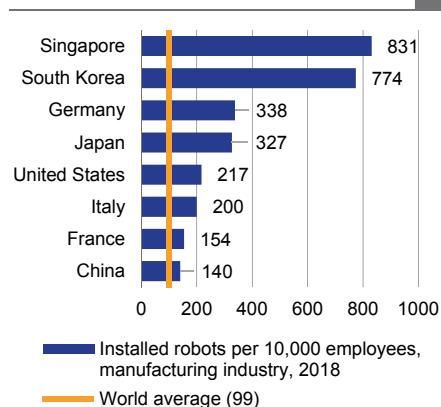
As the name implies industrial policy is primarily about the development and competitiveness of the goods and materials producing industry. However, given the strong dependencies on other sectors and infrastructure, the policy approach is usually much broader.

To put things into perspective, the European industry (including construction) accounts for around 20% of the bloc's total value added. It has been on a slowly declining trajectory for the last 30 years for which we have aggregated data. Over the same period the share of the service sector in total GDP has settled at around 65%. Manufacturing declined to around 15% of the EU's economy, compared to just 11% in the US, but above 20% in Japan and almost 30% in China (Chart 7). On the other hand, the European industry accounts for 80% of the EU's exports.

With the rise of the data economy, the importance of services and intangible goods has risen further. At the same time, physical and virtual economic processes are growing rapidly together, reflected in increased automation and IoT applications both in manufacturing and services (industry 4.0). A recent EIB report shows that EU companies in the manufacturing sector tend to lag behind their US peers, when it comes to the adoption of digital technologies. At the same time, the pandemic could accelerate "the maturity of digital technology".¹² These findings can be seen as a warning shot for Europe to make full and rapid use of its digital potential, in particular in industrial sectors where it still plays a leading role.

Europe among leading blocs in industrial robotics

8



Source: International Federation of Robotics

For industrial policy this means two things: first, the perspective that industrial policy should target exclusively the industry or manufacturing sector has become too narrow. Services and hardware merge increasingly and the boundaries between the physical and virtual world have become blurred. Industrial policy needs to be reconsidered accordingly.

Secondly, the distinction between industrial policy and other areas of economic policy such as competition, education, trade and taxes might become increasingly outdated. While in the past, the objectives of these policies often were opposed to each other, increasingly – as in the case of competition and industrial policy – they might rather interact with each other.

Industrial policy – e.g. in form of aggressive interventionism – might still conflict with the objectives of competition and antitrust rules and thus might lead to market failure. But as in the case of the EU's single market, an update of state aid rules and reconsideration of competition law is warranted against an increased involvement of non-EU (government-supported) companies that have led to market distortions. The same applies to tax policy, e.g. in form of the EU's planned Carbon Border Adjustment Mechanism that should protect the single market against unfair competition due to differing climate standards. Thus to

¹¹ European Commission (2020). An SME Strategy for a sustainable and digital Europe.

¹² European Investment Bank (2020). Who is prepared for the new digital age? Evidence from the EIB Investment Survey.



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protect competition within the EU and bolstering competitiveness of the European industry on the global stage are not diametrically opposed to each other. In the changed global environment they rather need to be aligned and synchronised.

Industrial policy and the COVID-19 outbreak

In a way, COVID-19 has already become a paradigm change, when it comes to industrial policy in Europe – at least in the short- to medium-term. As a response to the economic impact of the COVID-19 outbreak, the European Commission temporarily suspended key aspects of competition law regarding state aid and antitrust rules – its bulwark to protect the single market against distortions and anti-competitive conduct.

State aid rules were loosened substantially in a temporary framework in order to increase in a coordinated manner the scope for member states to support their economies (Chart 9).¹³ The framework is currently set to expire at the end of 2020 and member states have to notify the European Commission about state aids and prove that they are necessary, appropriate and proportionate.

However, despite this coordinated approach to avoid distortions of competition, there are large differences with respect to size and scope of state aid among the member states. About half of the EUR 2 trillion in state aid approved by the European Commission (as of May 2020) came from Germany. Hence there are concerns that differences in fiscal power among EU members may lead to unequal conditions and distortions of competition in the single market that could last well beyond the pandemic.¹⁴ The most prominent controversy regarding state intervention during the pandemic related to a EUR 9 bn rescue package by the German government to its flagship airline Lufthansa. It was approved by the Commission after Lufthansa accepted several commitments regarding the number of planes and take-off/landing slots at the Frankfurt and Munich airports.

In addition, with a temporary adaptation of antitrust rules, the European Commission aims to facilitate the supply of goods and services needed to tackle the COVID-19 outbreak. Under these circumstances, cooperation involving the exchange of ‘commercially sensitive information’ – otherwise problematic under the EU competition rules – under certain conditions. So far, the European Commission has not made any material changes to the EU merger rules (even though evaluations are ongoing).

While the experience of the COVID-19 pandemic shows the flexibility of the EU regarding industrial policy as a means of crisis response, it also provides a vivid illustration of the difficulties and challenges of national industrial policy in the setting of the EU’s single market. While it is too early to assess the results of this limited “experiment”, it might already give some credit to those who claim that in context of European economic and monetary integration, in fact, industrial policy is only possible at the EU level.

Industrial policy and the crisis package

The key objectives of the EU’s industrial policy strategy are supported by various programmes from the EU’s next seven year budget. These will be

EU state aid rules loosened during COVID-19

9

Temporary state aid rules allow for:

- Direct grants, selective tax advantages and advance payments
- State guarantees for loans taken by companies from banks
- Subsidised public loans with favourable interest rates to companies
- Safeguards for banks that channel state aid to the economy
- Short-term export credit insurance
- Recapitalisation aid to non-financial companies in need
- Targeted support for sectors, regions or for companies that are ‘hit the hardest’ by the outbreak of the coronavirus in the form of
 - i) deferral of tax payments and/or suspensions of social security contributions
 - ii) wage subsidies for employees

Support for COVID-19 related research and development, establishment and expansion of test facilities, and for the ‘production of products relevant to tackle the coronavirus outbreak’.

Source: European Commission

¹³ European Commission (2020). State aid: Commission adopts temporary framework. European Commission (2020). First amendment to the temporary state aid framework. European Commission (2020). Second amendment to the temporary state aid framework.

¹⁴ Süddeutsche Zeitung (2020).



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propped up by EUR 77.5 bn from the EUR 750 bn recovery fund, including for ReactEU, Horizon Europe, InvestEU and the Just Transition Fund.

The recovery package was created in order to address the immediate socio-economic impact of the pandemic and to “prevent a collapse” of the European economy.¹⁵ Its main instrument, the EUR 675.2 bn Recovery and Resilience Facility (RRF) will provide loans (EUR 360 bn) and grants (EUR 312.5 bn) to the EU27 members. While swift recovery from the pandemic and protection of the economic base is the key objective of the facility, it is also strongly linked to the Commission’s strategic priorities, in particular the EU’s climate target. As with the MFF, also the recovery package needs to comply with the target of climate neutrality by 2050 and 30% of its expenditures need to be earmarked accordingly.

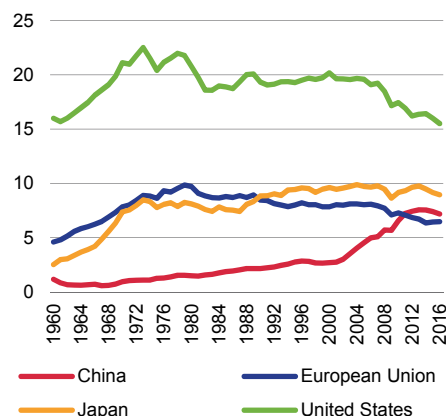
Industrial policy and the Green Deal

Climate neutrality by 2050 is one of two transition targets of the von der Leyen Commission. As such, the European Green Deal is also a key element of the EU’s industrial strategy. This includes “comprehensive measures to modernise and decarbonise energy-intensive industries, support sustainable and smart mobility industries, to promote energy efficiency, strengthen current carbon leakage tools and secure a sufficient and constant supply of low-carbon energy at competitive prices.”¹⁶

The EU among leading blocs on decarbonisation

10

CO₂ emissions (metric tons per capita)



Source: World Bank

The climate agenda materialises at the sectoral level, e.g through the EU’s Chemicals Strategy for Sustainability and the strategies on Clean Steel and Offshore Renewable Energy. The industrial policy strategy is supplemented by the Circular Economy Action Plan aiming at sustainability along value chains and consumption.¹⁷ The Clean Hydrogen Alliance should both accelerate the decarbonisation of the European industry and bolster Europe’s competitive position in the field.

The EU aims at large-scale investment in climate and environmental action over the next decade, with a key role for the European Investment Bank. 30% of the EU’s budget over the next seven years as well as the recovery fund, i.e. a total of above EUR 500 bn, will be dedicated to climate action and clean energy. The MFF as a whole should contribute to the implementation of the Paris agreement. Painful adjustments in carbon-intense sectors and regions will be addressed by the Just Transition Mechanism that includes the EUR 17.5 bn Just Transition Fund. In order to avoid disadvantages in global competition and reduce the risk of carbon leakage, a Carbon Border Adjustment Mechanism should be put in place by 2023.¹⁸

While green transition is a key industrial policy objective of the Commission, it needs to be further investigated how it relates to other industrial policy goals, in particular regarding the EU international competitive position and the ambition to become less dependent on imports and to reshore production in key sectors. Green transition itself without doubt offers manifold opportunities to bolster the EU’s innovative potential and leadership role in green technology.

This requires substantial investments and close cooperation between the industry, governments and academia. But if other industrial blocs, in particular the US and China, continuously fail to follow suit on the EU’s climate agenda over the next years and decades, the EU’s industry will increasingly feel the

¹⁵ European Council (2020). Special meeting of the European Council – Conclusions.

¹⁶ European Commission (2020). A new Industrial Strategy for a globally competitive, green and digital Europe.

¹⁷ European Commission (2020). Circular Economy Action Plan.

¹⁸ Böttcher, Barbara; Körner, Kevin (2020). Financing the EU’s recovery. EU Monitor. Deutsche Bank Research. August 5.



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competitive pressure. It still needs to be shown, whether instruments such as the planned Carbon Border Adjustment Mechanism and Just Transition Mechanism suffice to account for that.

Industrial policy and digital transition

The digital transformation of the European economy and catching up with the US and China in the global digital race is the second twin objective of the von der Leyen Commission that was also prominently integrated in the EU's industrial strategy. It is aligned with the Commission's overall Strategy on Shaping Europe's Digital Future which aims at a globally leading role in the digital economy, achieving technological sovereignty while at same time emphasising the protection of privacy as well as socio-economic and environmental sustainability.¹⁹ Successful digital transition should be achieved by exploiting the full potential of the digital single market and data pool and by speeding up investment in key technologies such as AI, robotics, blockchain, high performance/quantum computing and data cloud infrastructure. Bolstering the EU's critical digital infrastructure and the rollout of 5G are seen as core elements. Already in February, before the pandemic hit Europe, the Commission presented its AI and data strategy. Key elements are the creation of an "ecosystem of excellence" to integrate research and strengthen collaboration between EU members and help to close the EU's AI funding gap, create a legal framework to bolster trust in AI and regulate high-risk systems and to build a single market for data in the EU that should help to ensure Europe's technological sovereignty.²⁰

Also in the July Council conclusion on the next seven year EU budget and recovery plan, digital transition is highlighted as a key element of the EU's long-term strategy.²¹ However, the share of spending explicitly earmarked for digital (Digital Europe Programme and Connecting Europe – Digital) at EUR 8.6 bn over seven years accounts for only 0.5% of the EUR 1.82 trillion package. But more investment in digital will come from the EUR 75.9 bn Horizon Europe research and innovation programme.

The Council also decided on the introduction of a digital tax until 2023.²² The objective of the digital levy is to adapt the tax system to digital business models. The Commission is considering taxing large digital companies with a global annual turnover over EUR 750 m and more than EUR 50 m in the single market. Revenues from this levy are estimated at EUR 1.3 bn per year. The tax is controversial among members and there is risk of further tensions with the United States as the levy primarily affects US companies. But from the Commission's point of view, the current international tax rules do not adequately cover these business models, as many tech giants pay comparatively low taxes in Europe despite the profits they make in the single market. While this step is mainly about European tax policy, it has a strong link to industrial policy as well.

Industrial policy, competitiveness and sovereignty

The rapidly transforming global economic and technological environment and increasing involvement on non-EU players in the EU's single market have shown the EU that parts of its regulation are no longer fully up to the task.

¹⁹ European Commission (2020). Shaping Europe's digital future.

²⁰ Körner, Kevin (2020). (How) will the EU become an AI superstar? EU Monitor. Deutsche Bank Research. March 18.

²¹ Körner, Kevin; Wall, Mark (2020). EUR 750 bn EU Recovery Fund: Deal! EU Monitor. Deutsche Bank Research. July 21.

²² Böttcher, Barbara; Körner, Kevin (2020). Financing the EU's recovery. EU Monitor. Deutsche Bank Research. August 5.

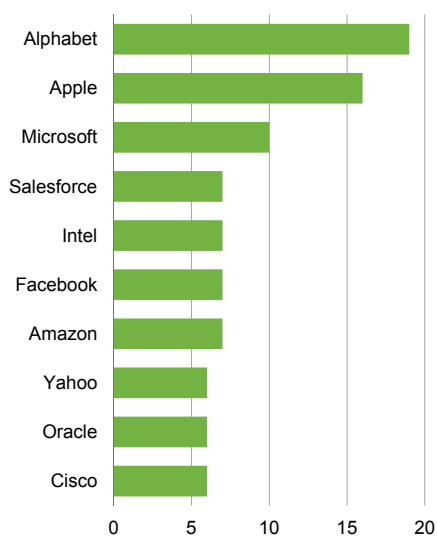


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AI takeovers by big techs

11

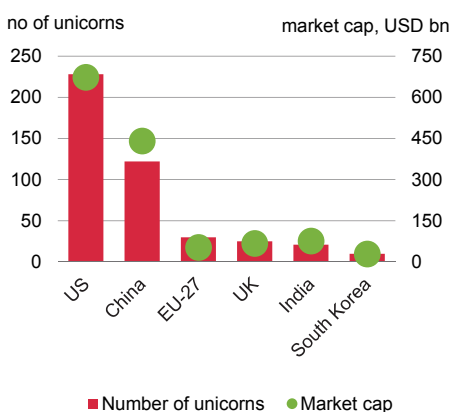
Number of AI company acquisitions by acquirers, Jan 2000-May 2019



Source : Crunchbase retrieved from Center For Data Innovation (2019).

Most unicorns are located in the US and in China

12



Note: unicorns defined as (startup) companies with an estimated value of USD 1bn or above.

Source: CB Insights (as of July 17, 2020)

Increasingly, the single market showed itself exposed to unfair competition, the risk of forced technology transfer and increased import dependencies in critical areas such as healthcare or infrastructure. Issues of lacking reciprocity when it comes to market access and intellectual property rights, in particular with China, remain insufficiently resolved. Unfair trade practices repeatedly led to legal proceedings in the WTO, even though the role of the institution as a trade arbiter was paralysed in the ongoing trade war between the US and China.

The EU has started to address many of these issues over the last years. A foreign direct investment screening framework was created to monitor and advise members on foreign investments in strategically important sectors. The EU's new industrial strategy foresees an Intellectual Property Action Plan to uphold technological sovereignty, promote global level playing field, better fight intellectual property theft and adapt the legal framework to the green and digital transitions. The EU seeks "industrial and strategic autonomy".²³ This should be achieved through an Action Plan on Critical Raw Materials, a new EU Pharmaceutical Strategy as well as the development of strategic digital infrastructures and key technologies. A white paper was adopted in June which addresses the distortions caused by foreign subsidies in the single market. It aims at supplementing state aid controls for EU members with respective instruments for non-EU companies. This will also apply to the acquisition of EU companies through non-EU actors, public procurement and access to EU funding. In addition, merger control and state aid guidelines are under evaluation in order to meet the demands of the rapidly changing economic landscape.

The European workforce is highlighted as a backbone of the competitiveness of the European industry. A strengthened focus on skills and education is reflected in a range of initiatives and programmes, including the launch of a European Pact for Skills, the European Education Area, and the Digital Education Action Plan.

Industrial policy, SMEs and European champions

One of the core discussions regarding European industrial policy relates to the question of European (digital) champions. There have been repeated calls among EU members for the creation of European 'champions' that are big enough to stand up against global competitors. The debate came up again prominently in the Commission ruling against the planned Franco-German rail merger between Alstom and Siemens. From the perspective of the EU's single market, this is a complex issue. The creation of national or EU champions could severely distort markets in the EU and give these companies advantages that might suppress competition and innovation. It can therefore be seen at the rather strong interventionist end of the industrial policy spectrum. It could also lead to a misallocation of resources as it cannot be taken for granted that governments and institutions have better knowledge of optimal business solutions, technologies and demand.

On the other hand, network externalities and scale effects in the digital economy particularly favour large companies. The broad range acquisitions of companies like Alphabet and Facebook have shown how large and dominating digital ecosystems are created in just a few years' time (Chart 11). These players control dominant shares of the European digital economy. Meanwhile, global competitors such as China have demonstrated, how a combination of protected home markets and state support can quickly lead to globally competitive players with increasing market shares abroad. The Chinese ambition to achieve global

²³ European Commission (2020). Making Europe's businesses future-ready: A new Industrial Strategy for a globally competitive, green and digital Europe.



Industrial policy in times of COVID-19 and its aftermath

innovation and technology leadership by the mid of the century is certainly a wakeup call for EU governments, not only from an economic but also geopolitical perspective.²⁴ While the Chinese model is not available – nor should be wanted – under EU regulation, it is clear that EU governments and authorities need to address the issue. Thereby, the top down creation of champions is not the only available approach.

Most notably, the reference to champions is absent from the EU's industrial policy strategy published in March. Instead, the focus here is on regulation to create a level playing field as well as a new SME strategy. At the same time, the EU emphasizes that its industrial policy strategy should be an "industrial innovation strategy at heart". Digital Innovation Hubs across the EU should help to access and develop technology. Public Private Partnerships and industrial alliances should help the industry to develop technologies, with a key role for the European Investment Bank and national promotional banks. Programmes like Horizon Europe and InvestEU are thereby essential to address funding gaps and market failure.

The European Innovation Council will become fully operational in 2021 and should be a network node for next generation technologies, start-ups and the transfer of technology to business applications. This is supported by the European Data Strategy and the creation of sector-specific common data spaces.

This network approach to size and scale in the EU's industry is much more complex and needs much more coordination than the outright creation of champions. But it also gives more room for market forces, trial and error and reflects much better the political and economic setup of the EU and its single market. Set up properly, it should allow for an adequate risk sharing between companies and authorities that allows for substantial investment in innovation and breakthrough technologies that otherwise would require the financial power of large global players.

Industrial policy – post-COVID

The European Union has started to overhaul its industrial policy strategy just at a time when the world is hit by the most severe recession since World War II. During this crisis, member countries were granted exceptional exemptions from EU state aid rules and other competition regulations. Rightly so, the joint priority now is to overcome this crisis as fast as possible and to mitigate the socio-economic impact in the years to come. An unprecedented EU recovery fund was created to support EU members in this crisis.

Governments have accepted large-scale guarantees for private sector risks and launched vast support and recovery programmes that will push up debt levels and reduce fiscal leeway in the next years. During this crisis, the role of the state in European economies has rapidly taken centre stage. Given the size and uncertainty of the crisis, this seems to reflect the current societal and political consensus. At the same time, debates about adequate size and limit of state interventions have intensified.

This is particularly pressing when it comes to the unwinding of exceptional government measures once the crisis is overcome. Hot political debates about normalising market mechanism and reinstating state aid rules can be expected over the next years. Post-COVID insolvencies of (pre-COVID) unprofitable companies that survived the crisis only with state support might cause further economic disruptions. Against this background, risks are that even post-COVID,

²⁴ Böttcher, Barbara; Körner, Kevin (2020). COVID-19 – a paradigm change for geopolitics? Focus Europe. Deutsche Bank Research. May 4.



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there might be calls for continued exemptions to the European state aid and competition rules. This could lead to lasting distortions and hurt the integrity of the single market.

While struggling to overcome the crisis and normalising economic conditions, the EU needs to face the long-term challenges to its competitive edge and prosperity posed by the rapid global economic and technological transformation. It has accepted a global front-runner role in green transition that needs to be closely streamlined with its other industrial policy objectives. The strategy developed by the Commission to address these issues in an integrated way is a crucial step in formulating a joint European response to some of the most formidable economic and geopolitical challenges of the next decades.

Close cooperation between the industry, governments and academia is necessary to meet these ambitions; and open questions regarding the realisation and compatibility of the policy objectives need to be addressed along the way.

For the transition to carbon-neutrality by 2050, it remains to be seen whether agreed instruments such as the Carbon Border Adjustment Mechanism and Just Transition Mechanism suffice to compensate for increased global competitive pressure if other major blocs do not follow suit on the Paris agreement.

For the digital transition, a network approach to the digital industry, innovation and skills, as presented in the strategy, certainly fits the setup and requirements of the single market much better than the creation of European champions. At the same time, the (further) development of (existing) industry clusters should be explicitly supported rather than aiming at a one speed development across regions.

On sovereignty and competitiveness, rapid implementation of updated regulation and close cooperation between members are key to protect the EU27 against unfair competition and transfer of intellectual capital. Much will also depend on the ability and willingness of EU members and governments to stand together, for example against attempts of non-EU actors to influence EU policies, access strategically sensitive sectors and technologies and to create economic dependencies.

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