Note drafted by the Eurofi Secretariat

HOW TO SUSTAINABLY IMPROVE CAPITAL ALLOCATION ACROSS THE EU?

Priorities for improving investment financing into the sectors of the future across the EU

Long-term and sustainable investment is essential for economic growth. An appropriate allocation of capital in the EU is crucial to ensure that investment supports productivity and growth through Foreign Direct Investment and technology for Europe's future and to promote exports.

The EU has a long-term growth and productivity weakness and is falling behind the US and China in a number of technologies that are essential not only from an economic viewpoint but also from a geopolitical perspective. Europe is home to only 16 unicorns[1], versus 91 in the US and 44 in Asia. Of the world's 15 largest digital firms, all are American or Chinese.

Furthermore, the financing gaps in European risk capital markets – caused by the lack of funding, the regulatory fragmentation across the EU and the risk averse nature of the European investor - are driving both early-stage and growth-stage companies to turn to non-European - for example US and Chinese - investors to meet their financing needs. Europeans can no longer afford to be the incubator for other industrialised countries.

In such a context, the success of the European states will necessarily entail a shared strategy. Technological challenges require a European industrial policy and strategy for technology funding.

In this perspective, member states need to accelerate their homework and implement strong and credible domestic reforms in order to improve the business environment, the competitiveness of SMEs, promote digital services, education and skills and attract private investors. But Europe has also to do more. In order to compete with large economies, the EU must focus its efforts and boost its firepower beyond the full use of InvestEU and a strong implementation of Horizon Europe[2].

The EU should restore cross border capital flows between EU countries, encourage the development of equity instruments and support more actively disruptive technologies that are key in maintaining Europe's leading role in innovation and global competition.

This note is divided into three parts: it focuses on the long-term growth and productivity weakness the EU is facing (i), the causes of this situation (ii) and propose different initiatives in order to contribute to a better allocation of capital across the EU and restore EU industrial leadership in the sectors of the future (digital, artificial-intelligence, innovation…).

1. The EU has a long-term growth and productivity weakness and faces challenges in terms of investment band innovation

Productivity gains in the euro area have failed to catch up with the U.S. over the past two decades, and productivity gaps across member countries remain significant. Corporate investment is much higher in China and Japan than in the EU and the US. and there is considerable variation across EU countries.

In terms of research spending, the EU is also lagging behind the US, China and Japan. Furthermore, Europe is adding an Artificial Intelligence (AI) gap to its digital gap. The next decade may well see a revolution in manufacturing service provision, through shared platforms built on control over data flows. Countries are increasingly engaging in active competition to secure leadership in many of these sectors. But none of the world's 15 largest digital firms are currently European.

Creating an environment where businesses thrive should be at the heart of the European project. A healthy business environment allows winners to grow organically, requiring limited direct state support or protection. However, according to the World Bank's Ease of Doing Business ranking, the EU is steadily losing its competitiveness with respect to other economies in its ability to foster a dynamic firm environment. Only two of 28 Member States saw improvements in their ranking in the 2019 report, three retained their positions, while all the rest saw a decline, compared to 2018.

1.1. The EU and in particular the euro area have not recovered from the deep economic crisis compared to global competitors

Euro-area average annual GDP growth since 2014 has been 1,9%, while that of the United-States has been 2,3%. The bulk of the lagging euro-area performance is attributable to Italy, Spain and France. Meanwhile central and eastern European countries 'growth rates have exceeded the EU average.

[1] Private companies with a value of at least $1 billion.

[2] Invest EU is the follower of the Junker plan that allows the building of bridges with the use of structural funds. Invest EU provides an EU guarantee to mobilise public and private financing in the form of loans, guarantees, equity or other market-based instruments, to strategic investments in the support of Research and Development through a dedicated investment window. Regarding Horizon Europe, the European Parliament has requested from the next multi-annual financial framework a budget of 120 billion euros over the 2021/2027 period.

1.2. Productivity gains are much higher in the US, China and Japan than in the EU

On productivity growth, Germany has been performing strongly over the past years, whereas productivity growth in other euro area countries such as France and Italy is well below that in China, Japan and the US (***see charts 1 and 2 in the annex***).

Looking at the past decades, there is a slowdown in productivity growth in Europe compared to previous decades, especially in France and Italy. This has led to higher potential growth in the United States than in the EU. it also explains the gap in the modernisation and innovation of companies. Indeed, productivity growth ultimately depends on the capacity to innovate and to improve business processes.

The example of Italy shows the major problems a country finds itself with labour productivity is stagnant over a long period; stagnant purchasing power (i.e. stagnant per capita incomes), declining competitiveness, declining profitability and corporate investment, stagnant tax revenues and a reduction in efficient public spending[3]. All economic policies in the EU should have the explicit objective of lifting productivity (education, training, development of tech companies, efficient public investment).

Moreover, digitalisation, artificial intelligence and the data and platform economy are all key drivers of European productivity, growth and employment. In the long term, maintaining economic growth and employment will depend on the ability of business and industry to make full use of the potential offered by digital technologies. According to McKinsey[4], if Europe on average develops and diffuses AI according to its current assets and digital position relative to the world, could add some €2,7 trillion or 20 percent, to its combined economy output, resulting in 1,4% compound annual growth through 2030.

1.3. Corporate investments and R&D are higher in large economies than in Europe

Corporate investment is much higher in China, Korea, and Japan than in the EU and the US. And there is considerable variation across EU countries (***see chart 3***).

On R&D, the European innovation scoreboard for 2019 is quite positive since it shows that the EU's average innovation performance has increased by 8,8 % between 2011 and 2018, one point above the US. However, in terms of research spending, the EU spent 1.93% of GDP in 2016, compared to 2.11% in China, 2.74% in the US and 3.14% in Japan[5]. China is catching up to EU levels (in percent of GDP), but still below US levels (***see chart 4***).

1.4. Europe is adding an Artificial Intelligence (AI) gap to its digital gap

Europe may risk falling further behind the US and China, the leaders on the adoption and supply of artificial intelligence (AI). Both are investing aggressively in these technologies.

According to a recent study issued by McKinsey Global Institute[6], although Europe's GDP is comparable with that of the United States and just ahead of China's, the digital portion of Europe's Information and Communication Technologies (ICT) sector today accounts for around 1.7 percent of GDP, lower than the share in China at 2.1 percent and only half the 3.3 percent share in the United States.

There is a large spread of artificial-intelligence (AI) readiness in Europe, but even the most ready countries are behind the United States on the AI frontier. AI initiatives remain fragmented in Europe, and investment in AI is nothing like the size of that in the United States or China. According to another note issues by Mc Kinsey[7]:

- As of the end of 2017, Europe was not home to any of the world's 10 largest internet companies and only two European companies were in the worldwide digital top 30;
- In February 2017, Europe had only 10% of the world's 185 unicorns – private companies with a value of at least $1 billion – compared with 54% for the US. China had 23% of unicorns (McKinsey Global Institute 2019). Only four European companies were in the top 100 global AI start-ups: Onfido and Tractable in the UK, Shift Technology in France, and Sherpa from Spain (CB Insights 2017);
- Despite the fact that Europe has been a pioneer in testing and developing AI technologies, capital invested for digital startups has been subscale compared with the US and China. As of the end of 2017, the US has invested around €220 per capita. In Europe, Sweden invested €123 per capita (the highest in the region) and Finland €58, but per capita investment was only €3 in Italy. In the provision of AI, Europe attracted only 11% of global venture capital and corporate funding in 2016. At this time, 50% went to US companies, with the balance going to Asia – mostly China (MGI 2017);
- In 2018, Europe had still not caught up (CB Insights 2017). In that year, China attracted almost half of global investment in AI start-ups, ahead of the US with 38%.

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[3] P. Artus, Zero productivity gains: is the euro zone heading in the direction of Italy?, Flash Economics, Natixis 15 February 2019.

[4] J. Bughin, J. Seeing, J. Manyika, L. Hämäläinen, E. Windhagen and E. Hazan, AI in Europe, MCKinsey, February 2019

[5] M. Demertzis, A. Sapir, G. Wolff, Promoting sustainable and inclusive growth and convergence in eh European Union, Policy Contribution, Bruegel, April 2019.

[6] Tackling Europe's gap in digital and AI, Discussion paper, McKinsey Global Institute, February 2019.

[7] Jacques Bughin, How to develop enough European AI startups?, VOX, CEPR Policy Portail, 26 February 2019.

2. Why is it so?

2.1. Enterprises are freer to work and make profits in the US than in Europe

The role of the State in economic life is less important in the United States than in Europe: Total public expenditure is 38% of GDP in the USA compared to an average of 49% in Europe. Consequently, fiscal and social contributions are higher in Europe.

Markets are also more flexible in the US. Europe imposes administrative burdens on creating new firms or on growing beyond arbitrary thresholds that trigger an increase in compliance costs. This is not observed in the US. Furthermore, the number of EU tax jurisdictions make for a complex business environment, especially for start-ups and SMEs. As a result, firms operating in the EU face a higher tax compliance burden than firms in the US, Japan, Australia or Canada, effectively reducing EU firm competitiveness in global markets.

In addition, Europe has been comparatively slow to adapt to technological changes (e.g. integrating digital into existing industrial processes, understanding the transformative nature of digital technologies). And yet digitalisation has dramatically augmented the reach, flexibility and agility of companies, big and small. Today's most successful businesses are those that use digital technology not just to boost productivity and improve internal processes, but as a means of reinventing themselves: their operational models, their value chains and their customer relationships.

Late 2017, only 24% of enterprises had adopted big data analytics, 16% had integrated robotics and automated machinery, and only 5% were working with Artificial Intelligence or 3D printing[8]. This also reflects a general shortage of highly-skilled tech professionals in these areas – hardly surprising when one considers that in 2017, 43% of the EU population had an insufficient (less than basic) level of digital skills, while those with low overall digital skills had actually increased from 23% in 2015 to 26% in 2017[9]. These numbers speak for themselves, and the repercussions down the road could be severe: Europe can hardly expect to become a global leader in Artificial Intelligence if its companies fail to master its most basic feature, namely big data analytics.

2.2. In spite of more buoyant savings in Europe, financial markets are three times more important in the US than in the EU in financing the economy

Cross-border capital flows are underdeveloped in Europe. Since the financial and sovereign debt crisis, financial flows between Eurozone countries have declined and fragmentation in the single banking market has increased despite the implementation of the Banking Union five years ago. Although the euro zone has a large surplus of savings over investment (while the USA has a deficit), European companies do not benefit from it. German, Dutch, etc. investments do not irrigate the countries of southern Europe, but are placed outside the euro zone, particularly in the United States and Asia. It is therefore a real paradox: the euro zone's savings surpluses do not contribute to investment in Europe.

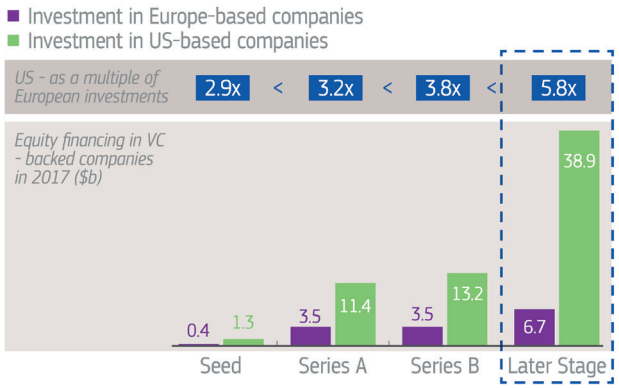
Banks in Europe, which are a key component of financial markets, are in a relatively weaker position compared to their American competitors, and the Capital Markets Union is far from having kept its promises.

The underfunding of innovative SMEs all along the financing chain is notably a significant EU weakness: the number of IPO on SME dedicated markets have halved to what it used to be before the financial crisis; venture capital funds in Europe have an average size of around €56 million. This is too small to allow EU start-ups to become bid companies. In the US, venture capital funds are 3x bigger than in the EU. The amount of money (venture capital) invested in the EU startup companies is 6x less than in the US. This is why successful start-ups in Europe are more likely to exit European markets in a context where they are unable to access sufficient scale-up funding. European unicorns like Spotify, for example, had turn to foreign investors to gain access to the capital they needed to scale up and become globally competitive.

In 2017, growth capital still represented less than 7.5% of overall funding in Europe – at 6.7 billion euro, against 92 billion euro of total private equity raised. This is one of the key reasons why Europe's most successful companies often end up in the hands of third country firms or investment funds (***see following chart***).

Chart 1 Funding gap between the US and Europe is widening in later stages...

Investments in Europe and US by stage focus in 2017, in billion US dollars



Source: Dow Jones VentureSource, EU industrial policy after Siemens-Alstom - Finding a new balance between openness and protection, EU Commission 2019

3. What can be done?

Monetary policy cannot do everything and cannot replace the domestic reforms needed for long-term growth and reduce unemployment. Productivity growth ultimately depends on the capacity to innovate and to improve business processes.

[8] European Commission, Digital Transformation Scoreboard, 2018.

[9] EPSC estimate based on Belt and Road initiative data.

Member States need to accelerate the implementation of structural reforms in order to improve the competitiveness of firms and increase trust between member states; reducing the administrative burden will help crowd-in more private capital. Transforming education and training[11] and improving labor market dynamics and enabling more diverse forms of work are also required. But structural reforms will not be sufficient to restore robust growth in Europe and encourage technological change.

Europe has to do more. Restoring cross-border capital flows between EU countries in order to allow excess savings from northern countries with a high marginal productivity of capital (Germany, Netherlands...) to flow to finance sustainable investment in countries with low labour productivity (South Europe, CEE countries) and developing equity markets in Europe would actively support sustainable growth in Europe.

Furthermore, in order to compete with large, uniform economies like the US or economies where the state plays a strong role, the EU must support disruptive and critical technologies that are key in maintaining Europe's leading role in innovation and global competition.

But as stated by Roger Havenith in the Eurofi Helsinki Magazine," In this perspective, EU public decision makers need in particular to reinforce financial instruments so that they can offer effective, proven fields, market-based solutions that can attract private capital and boost the European innovation ecosystem.... We also need to offer continuity in our proposal of support, throughout a company's lifetime, focusing as much on early-stage innovative ventures as on companies in the growth and expansion stages. We need to offer the kind of support that will allow the next global industrial champions to not only be born in Europe, but grow and flourish in Europe, without having to relocate to access the finance they need. Today, of the world's 15 largest digital firms, not one is European. We can no longer afford to be the incubator for other industrialised countries".

Lastly, a European industrial policy and strategy for technology funding is required if Member States wants to sustain their economic sovereignty and independence.

3.1. European countries need to accelerate their homework and implement strong and credible domestic reforms in order to improve the business environment, the competitiveness of SMEs and attract private investors

Monetary policy cannot be the engine of growth. High sustainable growth in Europe can only be achieved by reducing reliance on debt and reinvigorating productive strength. Only domestic structural reforms - e.g. reducing public spending in relation to GDP, reducing the regulatory burden on firms, taking steps to encourage innovation and technology diffusion, shifting taxes away from labour, encouraging apprenticeship programmes, modernizing social safety nets to reduce disincentives to work, enhancing public administrative capacity and procurement frameworks... - can solve structural weaknesses in Member States, raise output and productivity growth, contribute to a healthy business environment, and reduce competitiveness problems and recourse to debt.

A comparison between Germany and other EU countries such as France shows major economic and fiscal discrepancies that need to be addressed for achieving stronger growth in these countries and restoring trust between Member States. Reducing public expenditures specially when they represent too large a proportion of GDP (France 56,5%, Italy 48,8% versus 43,9% in Germany and 41% in Spain) is essential[12]. Furthermore, improving the quality of public expenditure (increasing funding for future technologies and R&D and reducing non-productive expenditures) is of the essence.

3.2. Restoring cross border capital flows between EU countries

Europe competes against the US and China, which benefit from large and relatively homogeneous markets. Even the largest European economies lack scale to compete on a global scale. However, cross-border capital flows declined in Europe after the financial and sovereign debt crisis. Data on cross-border capital flows shows that despite recent improvements, financial integration in the EU remains below pre-crisis levels. Retail credit markets are fragmented, cross-border private risk sharing is subdued, and a persistent home bias remains in portfolio allocations.

Accelerating the integration of European capital markets, making effective the Banking Union and more flexible the EU legislative process to respond efficiently to technological change are important policy priorities in this respect (see Eurofi papers produced on those topics for the Eurofi Helsinki events).

Regarding the CMU project, the Commission is always focused on the laudable objective of reducing regulatory barriers. As suggested by Jacques de Larosière[13], "there should be a little less focus on reducing barriers and a little more on Europe's attractiveness for foreign investors. How far can we open the windows and how can we attract more capital? Even if we don't have the answer, how to properly pose the problems is more important than the immediate answers. We should also focus on openness, because by focusing solely on the elimination of intra-European barriers, we are not looking at the essential issue, which is to attract the world's capital to Europe".

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[11] This will require coordination between parents, educators, governments, employers and employees with a focus on enabling lifelong learning, especially for individuals with skills that can be easily automated, as explained in the studies issued by MC Kinsey.

[12] The main issue in France is the level of public expenditure which amounts to 56,5% of GDP in 2017 compared to the average level of the euro zone (49% in 2016). This too high level of expenditure must be accompanied by an excessively high level of taxes, particularly on businesses. This is why France urgently needs to rebalance its public accounts in order to reduce the excessive level of tax and contributions which are detrimental to the competitiveness of French companies.

3.3. Deeper equity markets would bring economies closer to the technological frontier supporting growth and encouraging "greener innovations"

3.3.1. Equity financing in Europe needs to be significantly improved

Europe is lagging behind in this area. The funding of European companies is indeed characterised by a bias towards debt and against equity. The equity share of corporate financing is half as large as in the US-only 52% of GDP in the euro area, versus 120% in the US. European savings mainly consist of monetary assets (bank accounts, passbooks, bonds), but not shares. As long as powerful equity investors (e. g. pension funds) do not appear in the euro zone, we will continue to see the jewels of European industry passing into foreign hands that have the firepower to buy shares.

If we really want an equity market in Europe, it is essential to have a favourable ecosystem, and we need to change the regulations which create disincentives to long term investment and equity in particular (Solvency II, Accounting rules etc.). Correcting the current bias in favour of debt that exists in EU tax systems at issuer level is an important issue that needs to be addressed. Indeed, the tax deductibility of interest payments in most corporate income tax systems coupled with no such measure for equity financing creates economic distortions, impedes efficient capital market financing and exacerbates leverage. Another challenge is to develop more cross-border issuance and the holding of securities. This requires launching harmonization efforts at the EU level with regard to the legal regimes applying to securities (e.g. ownership rules) and insolvency laws. These actions may seem ambitious but launching them is essential for further developing EU capital markets.

3.3.2. Proposal for a European Savings-Investment Fund

Such a Fund was proposed in 2014 by Messrs Edmond Alphandéry, Jacques de Larosière, Daniel Gros and Thomas Meyer. This proposal[14] is still valid notably in the environment of persistent negative interest rates and should be taken up by the new Commission. It would notably overcome the current financial fragmentation of capital markets. This proposal can be summarized as follow:

At present, the euro area suffers from a savings surplus and an investment deficit at the same time. Savings surpluses and investment deficits are distributed unequally over regions. The key problem of the savings-imbalance in the euro area is that savers primarily demand debt instruments. The demand for debt is especially pronounced in Germany, which is also the largest contributor to the savings surplus. German savers traditionally are averse to equity investments and put their money into bank accounts, government bonds or life insurance.

The European Savings-Investment Fund would use euro area excess savings to fund the euro area investment deficit. This Fund would issue debt instruments and invest the funds raised into equity instruments. It offers savers what they demand and invests the funds companies cannot obtain otherwise. The sole purpose of the Fund is to achieve an attractive return (which is easier in an environment of persistent very low interest rates) with low risk. To raise capital the authors of this proposal envisaged to offer long-maturity savings bonds to euro area households and potentially life insurance companies with a guaranteed minimum real rate of return.

Funds should be invested in a broadly diversified international equity portfolio, with country allocation reflecting global GDP weights, market capitalization and a discretionary home bias factor. Investable instruments would include traded equity, private equity and mezzanine capital. It was envisaged that funds would be collected by National Public Development Banks, such as KFW in Germany, Caisse des Depôts in France, Cassa Depositi in Italy and ICO in Spain. These public institutions would guarantee the minimum interest and redemption of the savings bonds (and hedge this guarantee with their governments) …

3.4. Innovation and funding: fast tracking investment into the sectors of the future

Europe boasts a wealth of talent, world class researchers and skilled entrepreneurs. Europe should do better at turning that excellence into success stories. European champions need to be able to find all the support they need in Europe. We cannot afford to be the incubators for the US and China. This is why the EU needs to define a strategy for technology funding which supports breakthrough innovation, ensures the protection and diffusion of knowledge and seamless funding throughout the innovation cycle. We need in particular a quantum leap for private equity and venture capital in Europe; in addition, the EU must design market-oriented financial instruments that target gaps in terms of sectors, geographies and SME segments that stand to benefit most, so that we can ensure long-run growth.

<u>Supporting breakthrough innovation</u>

The EU innovation policy framework has for too long lacked instruments to support disruptive or breakthrough innovation, aimed at creating new markets. The new vehicle to address this gap, the European Innovation Council, is currently in the pilot phase but already has a budget of some 2.2 billion euro for 2019-2020, including combined grant and equity investments to fill market gaps for fast-growing, technology-based companies, and for targeted support to next-generation technologies (digital twins, human-centric AI, etc.).

The European Commission has proposed to scale this up to 10 billion euro under the next budgetary cycle. It is important to strengthen this proposal to encourage breakthrough innovation projects in Europe.

[13] Jacques de Larosière, Union des marchés de capitaux et supervision: quel système financier européen voulons nous ? Confrontation, 27 June 2019.

[14] Edmond Alphandéry, Jacques de Larosière, Daniel Gros and Thomas Meyer, « Proposal for European Savings- Investment Fund", Euro50 Group, 28 March 2014.

Ensuring the protection and diffusion of knowledge

Although Europe boasts the largest publicly funded research programme in the world (Horizon 2020), only about 1% of this funding is dedicated to knowledge and tech transfer. What is more, where R&D funding results in successful innovations, there are too few guarantees that these will be industrially deployed in Europe. A more holistic approach is needed, which acknowledges the interlinkages between the different stages from research to innovation, and from lab to company.

Seamless funding throughout the innovation cycle: a quantum leap for private equity and venture capital is urgently needed in Europe

The EU needs to offer continuity in the financial support throughout the lifetime of a company, from its early days to commercialisation, growth, straight through internationalisation and eventually even IPO.

A particular effort for public actors is needed to incentivise private venture capital investments – in particular from large institutional funds (pension funds, insurance companies, sovereign wealth funds) which are currently chronically underrepresented in venture capital, and by crowding in trusted foreign investors. Risk capital lacks critical mass. While Europe has made real advances in narrowing the gap to the US with regard to seed and early-stage funding for start-ups, it lags behind on the later-stage funding of companies. Indeed, investments in venture capital are approximately 10 times smaller than in the US for the early stage. For the late stage the ratio is 1 to 20.

In 2017, growth capital still represented less than 7.5% of overall funding in Europe – at 6.7 billion euro, against 92 billion euro of total private equity raised[15]. This is one of the key reasons why Europe's most successful companies often end up in the hands of third country firms or investment funds (***Chart 1)***. There is therefore an important role for public actors in developing the private equity and venture capital markets in Europe. This should be one of the key priorities of the relaunch of the Capital Markets Union project.

The success achieved with the European Fund for Strategic Investments must be continued, reinforced and broadened. It would be appropriate to create a European strategy for technology financing within the framework of Invest EU and with the participation of competent and experienced European institutions (such as the European Investment Fund) capable of raising private capital in order to contribute to the financing of equity capital for start-ups and innovative technology companies.

3.6. Technological and climate challenges require a European industrial policy

At a time of increasingly fast technological and climate changes, Europe must pool its strengths and be more united than ever. The industrial sector of the 20th century is changing to digitalization. Brand new industrial sectors are appearing such as those linked to artificial intelligence, others are changing at great speed such as the car or railways sectors, and other traditional sectors will continue to be essential such as steel or aluminium.

As stated in the Franco German Manifesto "If Europe still wants to be a manufacturing powerhouse in 2030, we need a genuine European industrial policy. The investments required to enable Europe to compete on the global stage and the development of long-term industrial strategies aiming inter alia at a carbon-neutral economy are so important that we can only succeed if we pool our funding, our skills, and our expertise. The choice is simple when it comes to industrial policy: unite our forces or allow our industrial base and capacity to gradually disappear. A strong industry is at the heart of sustainable and inclusive growth. And above all, it's what will give Europe its economic sovereignty and independence".

Benjamin Angel outlines in his article for the Eurofi Helsinki Magazine that "a strategic focus on growing future innovation leaders is important here, as is attracting and retaining skilled labour in Europe. A possible investment arm of a European industrial strategy should keep in mind the objective of developing innovation in key industries of the future, fixing financial market inefficiencies and fostering technological adoption and diffusion. It could, for example, focus on strategic long-term investments, tailor-made to support European champions of the future".

A clear view of which sectors will drive future innovation should guide the industrial policy measures of government and the EU. Clarity is needed about the nature of support for European industry. The political level needs to make strategic choices about support for broad technologies or industries. Particular attention needs to be paid to areas: a) where Europe possesses or is developing a competitive advantage, b) chooses to prioritise and invest public resources, given their importance in addressing societal challenges, c) sees as vital to its strategic autonomy. Many of these areas have already been identified in the EU's 2017 Industrial Policy Strategy, such as automotive (including batteries), energy systems, the Internet of Things, robotics, Artificial Intelligence, defence, space and the bio economy.

However, action in these areas needs to be stepped up and accelerated if Europe is to stay in the global race. Focus should also be placed on key enabling technologies such as 5G or quantum technologies that will be central to Europe's future cybersecurity.

3.7. For a European Sovereign Wealth Fund or a European Industrial Renaissance Fund (EIRF) as an investment arm of a European industrial strategy

Countries like China systematically use sovereign wealth funds (SWFs) – state-owned or supported investment vehicles – as strategic tools to acquire competitive advantages and strategic inroads abroad. These funds not only offer a return on investment but also an opportunity to inform and shape economic developments elsewhere.

[15] Invest Europe, 2017 European private equity activity Report, May 2018.

The EU has no real SWF, which limits the set of tools it can use to support and diversify its economy and puts it at a comparative disadvantage. A European SWF could provide an optimal and future-oriented way of developing strategic sectors with a strong focus on innovation. Of course, this would require a properly designed governance and accountability framework, as these types of tools often suffer from lack of transparency in their structure, investment strategy and returns. Naturally, the ability of a European SWF to deliver an impact would depend on the resources it can mobilise...

Another proposal could be to set up a European Industrial Renaissance Fund (EIRF) able to be a long-term cornerstone investor which could complement and amplify national initiatives. Such a Fund could invest across the spectrum both in private and public markets and in particular in innovation leaders, contribute to building European champions in EU strategic sectors, take strategic equity holdings in EU companies, to ensure EU anchoring. This vehicle would maximise crowding-in of resources on specific thematics/sectors and in specific geographies and would provide a European scale.

Lastly, as stated by Pervenche Berès in her article for the Eurofi Helsinki Magazine, "Europe should rethink the competition policy and the way it should support an EU industrial policy. Up to now this policy was first targeted to oppose monopoly but in a more complex world trade environment the debate has finally emerged on how should the EU competition policy favour EU stakeholders vis-à-vis their global competitors. In this spirit, it will be very interesting to follow the next step after the adoption of the copy right directive with which the EU could be taking the lead to boost its cultural and creative industry".

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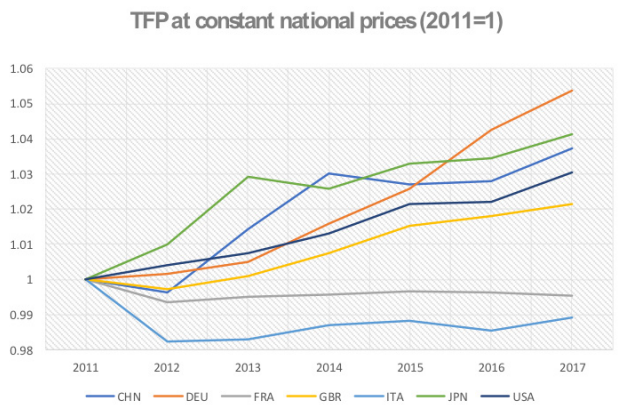
Despite domestic and EU efforts to strengthen Europe's industrial base and innovation potential, the results in Member States have been disappointing particularly in light of the pace of rapid change that the world is now undergoing. The onus is now clearly on member states to come together around a coherent set of actions that they truly embrace and endorse.

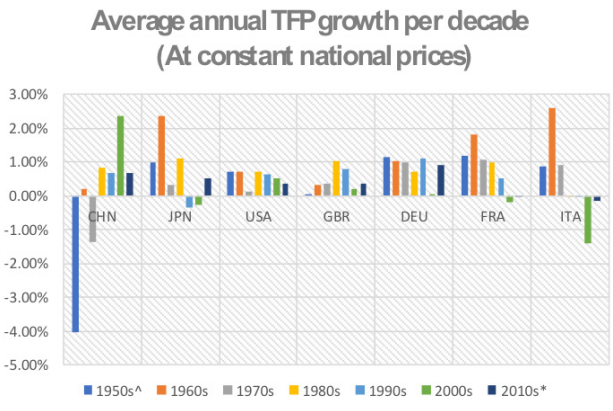
ANNEX

Chart 1



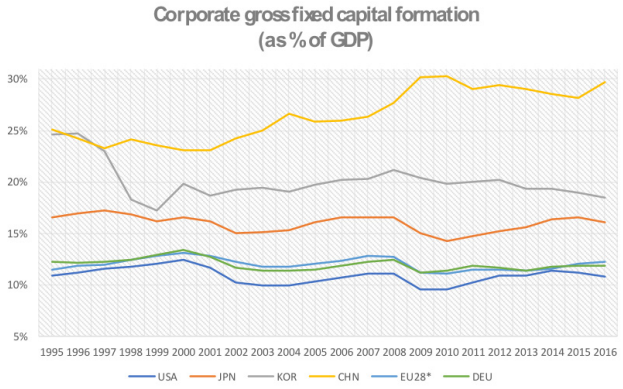
Source: Penn World Table 9.0

Chart 2



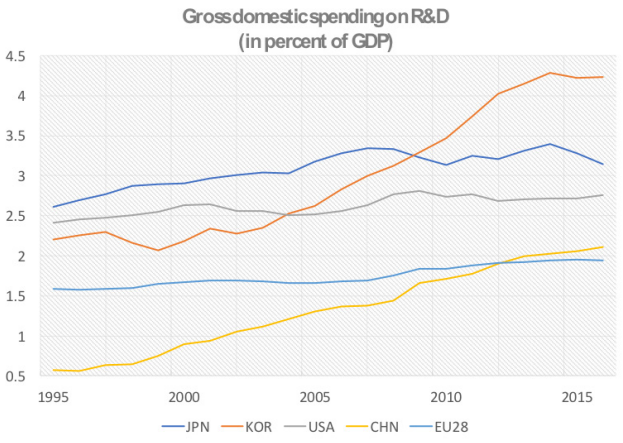
Source: Penn World Table 9.0

Chart 3



Source: OECD

Chart 4



Source: OECD.