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EU'S SCRAMBLE FOR DIGITAL SOVEREIGNTY

Why being the global regulator will not be enough

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EXECUTIVE SUMMARY

The COVID-19 pandemic has accelerated the aspirations of the EU's “technology sovereignty”. The European Commission (EC) has been concerned about the fact that the EU depends almost entirely on foreign services for crucial technology, particularly in digital services. The technology gap between the EU and the two global leaders, the US and China, might harm the long-term economic development of the EU as well as undermine its global ambitions. Up until now, The EU has been successful in shaping the digital world through the “Brussels effect”. However, to achieve its digital ambitions, the EU will also need to become a digital power, improving its digital and financial common market to establish an enabling environment to increase private investments in technology development. Furthermore, it will need to fully exploit the opportunities created by the Next Generation EU recovery plan, promoting a pan-European digital approach. It is time for the EU to play the game of the digital economy, rather than only write the rules of it.

Short bio

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Introduction

The European Commission's (EC) quest for digital sovereignty is just a segment of a wider narrative to strengthen the geopolitical weight of the European Union (EU). Global actors are aware that technology will be a key driver of economic growth and a crucial competitive asset in international markets. Digitalization is already becoming a major component to increase productivity and profitability in a wide range of industries. The COVID-19 pandemic has laid bare how critical and strategic digital products and services are to the functioning of the current economy.

This megatrend has however consolidated the dominant market position of foreign digital multinationals in the EU markets, raising critical questions ranging from the EU's ambition for technological sovereignty to whether it might harm the long-term economic developments of the EU and undermine its global ambitions. As acknowledged by a recent report produced by the Joint Research Center of the EU, the COVID-19 pandemic has clearly shown the dependency of EU economies on technology and data storage infrastructure from foreign states (Graglia 2020). Moreover, the growing tensions on technology between China and the US, the two undisputed global technology leaders, risk damaging the EU's economic development.

Even though the EU's digital sector cannot currently compete with the US stock market size and value nor with China's state-controlled economic development, the EU has attempted to strengthen its role as "tech international regulator". The EU has tried to set standards and regulations in technology, forcing foreign technology companies to comply with those rules to access the EU domestic market, one of the largest and richest in the world. Between January and June 2019, 49 percent of global regulatory proposals for the tech industry stemmed from the European Union or EU member states, and more than half of those proposals regulated competition and company structures (Murgia 2019). Being on the frontier of regulations, the EU has also been able to produce a spillover effect of its regulatory interventions, influencing other jurisdictions. The General Data Protection Regulation (GDPR) has, for example, inspired the revision of privacy laws in 120 countries. However, this approach will not be enough to achieve EU digital ambitions.

Global leadership in tech regulation should be accompanied by growing investments and a common EU strategy to reduce its digital gap with the US and China. To empower advancement of the EU digital economy, this paper identifies three priority areas on which the EU should keep strengthening its public policy, speeding up and expanding initiatives that the EU has already started to promote. First, it should further foster a common digital and financial market. Second, it should encourage a pan-European digital plan through the Next Generation EU. Last, it should keep strengthening its role of tech international regulator, avoiding tech protectionism.

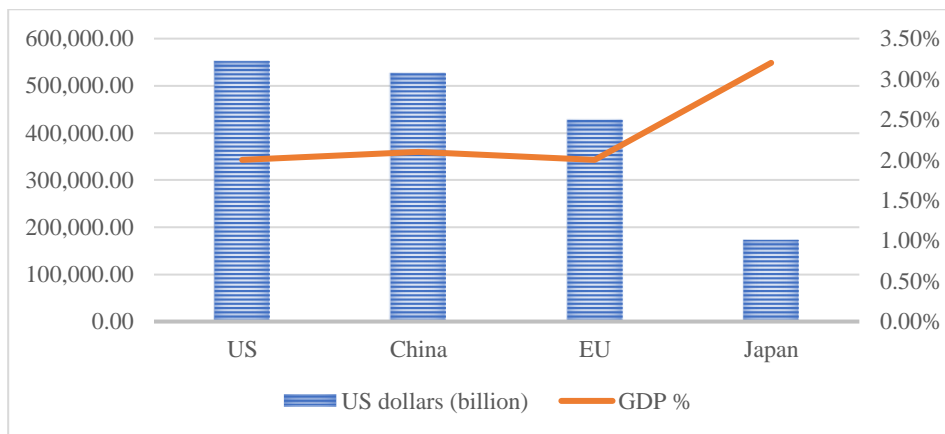
1. EU: digital (under)development

The EU can, in theory, economically compete with the US and China. EU Gross Domestic Product (GDP), expressed in Purchasing Power Standards, represented 16% of world GDP, against the 16.4% of China and 16.3% of the US (Eurostat 2020). Moreover, despite having a lower GDP per capita than the US, the EU has a much higher figure than China. Yet, the EU appears to be lagging far behind the other two global leaders in the digital economy, the engine of economic growth in the present economy and in the future. Europe's ICT industry represents only 1.7% of its aggregate GDP, while in China, the figure is 2.1%, and in the US 3.3% (Bughin et al. 2019). The EU has



failed in promoting proper investments in research and development (R&D), a key factor in driving productivity and profitability up. In 2018, the R&D expenditure as a percentage of GDP was 2.02% in the EU, while the US invested 2.82% and China 2.14%. Despite the perceived small gap with China, historical trends provide a more accurate picture. China has increased its share of GDP in R&D by 0.7% in ten years, while the EU by only 0.31%.

Figure 1: Gross domestic spending on R&D (\$ millions) and the percentage of GDP in 2018



Source: author's elaboration from OECD data: <https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm>

Since 2011, only 13% of newcomers in the top R&D spenders have been European companies, while 25% were Chinese and 37% from the US. Moreover, EU firms included in this group tend, on average, to spend less on R&D than their competitors from China and the US (EIB 2014). In its biennial review on R&D, the EC stressed that the EU is lagging behind in terms of investments and intangibles, in particular from the private sector (EC 2020a). The European Investment Bank (EIB) found out that while US firms spent 48% of total investments in intangibles, the EU ones allocated only 36% (EIB 2018). Intangibles¹ are widely acknowledged as drivers of the digital economy's development. In advanced digital economies, they represent around 2/3 of the digital investments (Anderton et al. 2020). Since 2000, the EU has produced only 17% - \$240 billion – of the tech firms established, while Asia and the US have represented 35% - \$675 billion – and 48% - \$1,370 billion – of the total amount, respectively (Detrixhe 2018). In a recent report, the EIB stated that the EU is risking to repeat what happened in the 1990s when the US gained a remarkable advancement in productivity due to heavy investments in information technology, leaving the EU behind. With the only difference that today China is also competing in this global race.

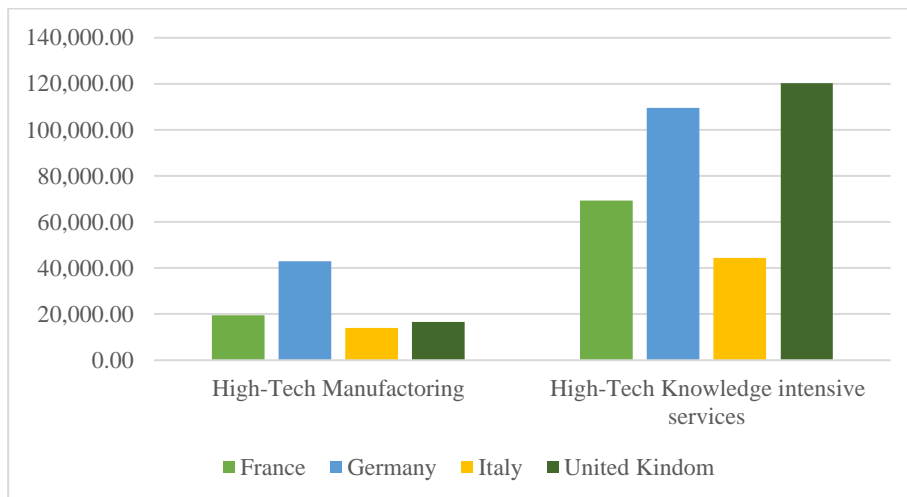
It is not, however, just a matter of availability of funding. It also matters to strategically allocate them. EU countries have heavily invested in R&D in traditional segments such as automotive manufacturing, petrochemicals, or pharmaceutical, underperforming in high-tech sectors.

¹ An intangible asset is an asset that is not physical in nature. Brand recognition, platform, software, and intellectual property, such as patents, trademarks, and copyrights, are all intangible assets.



Analysing in more detail, one observes that the EU has a major technology gap in the service sector rather than in manufacturing (EIB 2018). With Brexit, the EU will lose one of its leaders in high-tech knowledge services, potentially increasing its lagging with the US and China.

Figure 2: Value added (million euro) in high-tech manufacturing and high-tech knowledge services in 2018



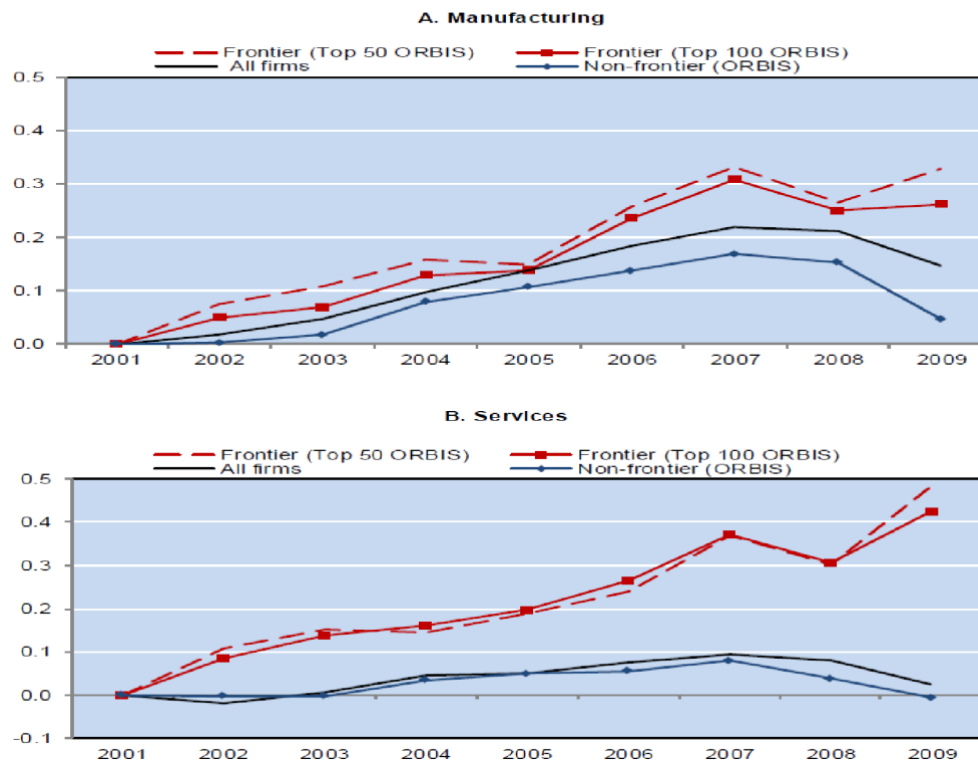
Source: Author's elaboration from: <https://ec.europa.eu/eurostat/statistics-explained/pdfscache/46748.pdf>

Focusing on high-tech knowledge services, the EC has identified risks related to the dependency on US Big Techs' intermediation as well as security threats connected to Chinese tech giants (Madiaga 2020). In particular, the EC has been concerned about the developments in strategic segments - such as software, platforms, artificial intelligence (AI), cloud computing, machine learning, and the Internet of Things (IoT). According to a report of the Center for Data Innovation, in the field of AI, for example, the US is the global leader in six categories (talent, research, development, and hardware), while China leads in adoption and data (Castro 2019). According to McKinsey, if the EU catches up with the US in terms of AI development and adoption, it could add 3.6 trillion euros in its aggregate GDP by 2030 (McKisney 2019).

Digitalization is indeed broadly associated with better productivity. A 2015 study of the OECD pointed out that frontier firms – defined as the 100 most productive companies – have been rapidly increasing their productivity gap with other firms in recent years. The study also found out that the frontier enterprises highly invest in intangibles and technologies. More productive firms are, on average, larger than their less productive counterparts. Moreover, frontier firms in the digital sector are considerably more productive than frontier firms in the non-digital sector (Anderton et al. 2020). This trend is far more remarkable in the services industry than in manufacturing, raising further concerns over the EU's future competitiveness in the digital services economy (Andrews et al. 2015).



Figure 3: Productivity gaps in manufacturing and services



Source: Andrews et. al 2015, p. 12

2. Fostering a common digital and financial market

The EU has developed a common market for physical goods, but it has failed so far to do the same for services. While European enterprises could easily trade in the whole common market, scaling up in services has been challenging due to the lack of synchronization of the rules that dictate the use of digital services. The US and China can count on a large and homogenous domestic market, operating with the same rules and a common language in their respective domestic market. Instead, in the EU companies need to operate in a cross-boundaries market in which national jurisdictions often implement different regulations, taxes, and, sometimes, industry standards. Moreover, within the EU, extreme country heterogeneity in terms of the adoption of digital technologies exists. According to the Digital Economy and Society Index 2019, across the EU, the average EU score was around 50, with Nordic countries topping the rank with 70 while Greece, Romania, and Bulgaria were at the bottom with 40 (Anderton et al. 2020). This is the first intrinsic barrier to scale up investments in the European digital market.

A way to properly tackle digital country heterogeneity is to further strengthen the EU Single Market, specifically fostering a single digital market and EU-wide financial markets. With the Commission's Digital Single Market (DSM) Strategy introduced in 2015, the EU has established positive steps along the way. Yet much more could be done to speed up and improve this process. As stated by a 2018 Presidency discussion paper, the EU does not need a Digital Single Market



but rather “a digitized Single Market”, meaning that digitalization is a broad process which affects – in different degrees – the whole economy (Council of the European Union 2018a; Council of the European Union 2018b). This would imply adopting a holistic approach which integrates digital and no-digital aspects, improving the framework developed by the 2015 Digital Market Strategy (Marcus et al. 2019).

Another set of issues is connected to the underdevelopment of the European equity finance and venture capital markets. Financial industry support to innovative firms is a key enabler to empower a firm’s growth. For historical and structural reasons, the EU has a remarkable gap with venture capital markets in the US and China. In 2018, Europe invested 23 billion euro in venture capital while the US and China recorded 130 billion euro and 92 billion euro, respectively (Matveeva 2019). As intangible investments are hard to collateralize and have higher uncertainty and risks connected to high sunk costs, their financing does not seem to be suited for traditional banking (Anderton et al. 2019). As stock market capitalization is much lower in Europe, its equity markets offer a little incentive, making it more difficult for venture capital investors to re-sell investments through equity markets (EIB 2016). Therefore, for the EU finalizing the capital markets union and the banking union is of paramount importance to establish a more competitive financial sector which could more efficiently support investments in innovation. Furthermore, the UE could adjust and ease requirements – such as on capital requirements or on fiscal rules enforced by Basel III – to incentivize its banking industry to financially support and invest in early-stage start-ups and in basic research.

3 Next Generation EU: not missing the chance

After intense discussions, the European Council has agreed on a 750-billion-euro recovery plan, the Next Generation EU, which will comprise grants (390 billion euro) and loans (360 billion euro). One of the pillars of the Next Generation EU is to drastically increase investments in the EU digital economy’s development (EC 2020b). Within the wide framework of this recovery plan, the Strategic Investment Facility should provide companies with support for long-term investments in digital solutions. The Digital Europe Programme will, instead, focus on improving a common digital market and on promoting developments in the EU strategic data capabilities. Moreover, to fund digital investments, the plan proposes to allocate financial sources gained from a European digital tax, if the multilateral effort led by the OECD fails in reaching a result, and from a new corporate revenue tax that is supposed to generate around 10 billion euro annually. Both of these new tax income streams are yet to be approved, leaving doubts on the effectiveness and timing of these sources of funding.

What stands out is, however, that a key priority of the EC is to address the EU digital gap. While the COVID-19 pandemic has dramatically accelerated this awareness, the EU has also been facing this issue in the pre-Covid19 world. For example, in a leaked document of the EC disclosed in 2019, officials urged the EC to establish a European Future Fund with the aim to invest 100 billion euros in equity stakes in high potential EU companies (Gallagher 2019). The challenge now is how to best allocate the Next Generation EU resources to achieve digital common policy objectives. The large availability of funds without a common strategy is not likely to produce any macro changes within the EU economy. The EU should consider two macro implications when developing the policy objectives of the Next Generation EU for digitalization. First, in addition to national initiatives and projects to foster digitalization within a country, to fully benefit from this



unprecedented recovery plan, the EU will need to promote pan-European investment projects which would produce spillover effects in multiple countries as well as transcending national interests, would pursue European strategic purposes (Beetsma et al. 2020). Second, the EU should not only focus on catching up with existing digital developments in critical areas, but it also needs to be looking further into the future, putting an effort in leading the forthcoming wave of technology.

4. Digital regulations: the “Brussels effect”

It is widely recognized that the first-mover advantage in setting standards and rules can provide an edge in shaping the digital economy developments. The US-China Security Review Commission, for example, acknowledged that China is seeking to exploit a potential “Beijing effect” to set international standards based on their vision of a digital economy (Chen et al. 2018).

Despite its digital industry underdevelopment, the EU has been able to play an important role in shaping the global digital economy through its digital regulations. Being its domestic market, one of the largest and richest of the world, companies accept its standards as a price to pay to operate in the EU market. Moreover, as complying with multiple regulatory jurisdictions can be extremely expensive, they are incentivized to extend and adopt EU rules to their global operations. The “Brussels effect” has been extremely remarkable in globally influencing personal data regulations, for example. The European GDPR has been a regulatory model for 120 countries worldwide.

Now the EU is expanding its ambitions as a global digital rulemaker, trying to globally impact regulations on AI ethics, on the introduction of an international/European digital tax, or on an antitrust practice, for instance. The strategy proposed by the Von der Leyen Commission is grounded on four main pillars: (i) reducing EU’s dependency on foreign digital services; (ii) supporting European companies to create value from data; (iii) regulating AI applications to mitigate risks and (iv) updating EU product safety rules to cover eventual damages from AI applications. While these objectives could help the EU to provide European tech firms with an enabling business environment, the EU cannot forget to mitigate the risks of not establishing a level playing field. The EU should reject digital protectionism and this approach could, perhaps, help the tech European industry to grow in the short term but not to become more competitive. Furthermore, it could undermine the EU's role as the global tech regulator, further fragmenting the global digital market. The EC will not have an easy job. It will need to find an equilibrium between reducing its dependency on foreign digital services, increasing domestic investments and protecting its citizens’ rights while guaranteeing a level playing field to benefit from FDI and competition.

Conclusion

The EC has been emphasizing the need to strengthen the EU digital economy, reducing its dependency on foreign providers of digital services while increasing domestic investments and implementing further tech regulations. This approach of the EC has economic and political aims. The digital economy will increasingly drive economic growth, impacting cross-industry productivity and profitability. Furthermore, the dependency on foreign digital services could undermine the EU political autonomy, forcing EU countries to be subjected to external



developments and vulnerable to foreign interests. These concerns are particularly relevant in a scenario where the two global tech leaders, the USA and China, are likely to clash in the domain of digitalization and its rules. To achieve its global ambitions, the EU needs investments as well as fair tech regulatory interventions. In the former area, the first step is to further push towards a better and more integrated digital and financial common market. In the latter, instead, the EU can proceed with its global role as tech regulator, aiming at providing standards and rules which other jurisdictions can adopt as a model rather than imposing protectionist measures. Doing so, the EU will not only be writing the rules of the game, but it will also be able to play in it. To achieve this goal, the EU should focus on:

- Tackling digital heterogeneity within the EU, improving its Digital Single Market.
- Finalizing the capital markets union and the banking union to establish a more competitive financial sector which could more efficiently support investments in innovation.
- Adjusting and easing requirements – such as on capital requirements or on fiscal rules enforced by Basel III – to incentivize its banking industry to financially support and invest in early-stage start-ups and basic research.
- Within the framework of the Next Generation EU, promoting pan-European investment projects to pursue European strategic purposes and putting an effort in leading the forthcoming wave of technology rather than only trying to catch up with existing digital developments in critical areas.
- Strengthening its role as a global tech regulator while guaranteeing a level playing field to benefit from competition and FDI.

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