

# 1. Learning from the past? What should Europe learn today from its past industrial policy challenges?

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## Executive summary

This policy chapter analyses the evolution of the European Union's industrial policy in the face of foreign competition from the 1960s to 2019 and the lessons to be drawn from this experience. The first part analyses the different EU instruments in terms of industrial policy vis-à-vis those of Japan and the United States in the 1950s and 1960s. It shows that the deficiency of the EU's instruments compared to the two other economic powers during those decades led to a strengthening of the competitiveness of Japanese and US industries at the expense of European high-tech companies. At the same time, the absence of an EU-wide industrial policy at the time for those sectors led to significant foreign technological dependency of European companies. The second part of this policy chapter analyses the response of EU institutions to US and Japanese industrial competition from the 1970s to the 1990s and its impact on the competitiveness of EU companies. It demonstrates that the strengthening of horizontal instruments in the 1980s and the strategy of promoting open markets led to the substantial growth of manufacturing output but failed to sufficiently materialise in terms of technological innovation and productivity growth. The main reasons for this were the late adoption of EU industrial policy instruments to improve the competitiveness of high-tech sectors and the lack of investment of European companies in plants and equipment. Finally, the EU's horizontal and "open markets" strategy led to increasing foreign industrial and technological dependence of European companies. The third part of the chapter describes the EU's industrial policy strategy and assesses its results in the face of increasing Chinese industrial competition from 2000 to 2019. It shows that the pursuit of the EU's industrial policy strategy implemented during the 1980s and the 1990s did not enable European industry to meet the "Chinese challenge". The main factors explaining this failure are, first, the lack of an EU approach to identify the strategies of other industrial powers and their companies on a long-term basis. Then, the absence of EU-wide instruments for effective coordination between the Member States forced European companies to make "intelligent" investments to improve the competitiveness of the EU's industry. Finally, there are no effective tools at the EU level to efficiently mitigate foreign industrial and technology dependency. To solve these problems, we propose, first, to create an inter-DG task force to analyse competitors' strategies and identify strategic vital industry processes to develop and protect EU competitiveness. Then, we propose to mobilise investment for European industry and coordinate business strategies to authorise the Commission to issue opinions and grant loans to increase the investment of European companies based on the new task force's work. Finally, if the Commission continues to promote access to foreign markets and the fight against protectionist practices at a multilateral level, the institution should be able to automatically apply provisional reciprocity measures in the event of foreign protectionist actions. These reciprocity measures include the application of safeguard clauses and the blocking of problematic agreements between companies for EU economic security.

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## 1.1. Introduction

Today, there is a broad consensus among the various European economic and political actors that the European industry suffers from a major lack of competitiveness in the face of its two biggest competitors, China and the United States. In a recent report, BusinessEurope warned that the “European economy was falling behind given that in 2023 the EU GDP grew by 0,5% only vs 3,1% for the US and 5,2% for China” (BusinessEurope, 2024). In its latest report on Competitiveness and Industry, the European Round Table for Industry (ERT), for its part, called for Europe’s business case to be rebuilt as a matter of urgency to avoid getting out of business (ERT, 2024). On the public institutions side, the European Commission expressed its concern in 2023 that “since the mid-1990s, the average productivity growth in the EU had been weaker than in other major economies.”<sup>3</sup>

Many competitiveness indicators are in red: the EU is losing out on the latest technological developments that could enable its future growth in areas such as quantum computing, artificial intelligence and biotechnology.<sup>4</sup> It depends on imports of raw materials and products essential to the dual digital and environmental transition, such as lithium and semiconductors. It is also highly sensitive to fluctuations in the global energy market and suffers from a significant lack of investment in digital and environmental transition (Letta, 2024). Finally, European industry is overdependent on foreign advanced technology.<sup>5</sup>

To explain this situation, historical analysis is essential. It enables national governments and European institutions to understand the mistakes of the past and avoid repeating them. EU technological dependence and backwardness have been constant problems since the 1960s. The investment gap between the European industry and its main competitors was already highlighted by the Commission in the 1970s in strategic communications on industrial policy.<sup>6</sup> Finally, the issue of the current increase in competition from Chinese producers in advanced technologies driven by the outsourcing of European production and the Chinese aim to move up the value chain can be compared to the situation in the 1970s and 1980s when European producers had to face increased competition from Japan in strategic industries such as the automotive and high-tech sectors (Keck et al., 2013).

In this policy chapter, we will first describe the historical deficiencies of EU industrial policy governance<sup>7</sup> in comparison with its main competitors (Japan and the US in the 1960s to the 2000s and currently China and the US). We will then analyse how the EU responded to increased competition from these economic powers from the 1960s to today to assess the success and failures of the EU’s industrial policy. Finally, we will provide, based on this analysis, policy recommendations for the new Von der Leyen II Commission.

## 1.2. A structural initial deficiency in the EU’s industrial policy instruments in comparison with the Community/EU main competitors

Originally, EU policies in favour of European industries differed per industry, given the existence of different treaties. In the coal and steel industries, the ECSC High-Authority (absorbed by the EEC Commission in 1967) had broad powers of intervention under the Treaty of Paris (1951).<sup>8</sup> In addition to measures to manage the common market for steel and coal, it could also apply a series of interventionist measures such as drawing up yearly forecasting programmes, five-year general objectives and long-term orientation studies and granting investment loans to help companies in their growth strategies. Furthermore, in the event of a crisis, the Commission could apply mandatory production quotas and minimum prices. Finally, the Commission had the power to implement various research projects to foster steel technology and production but also to improve the working conditions of steelworkers. To apply these policies, the ECSC Treaty provided the Commission with own financial resources thanks to a tax levied on the production of crude coal and steel in the EU (Art. 49 ECSC).

<sup>3</sup> European Commission, COM(2023) 168 final, Long-term competitiveness of the EU: looking beyond 2030, 16 March 2023.

<sup>4</sup> Ibid.

<sup>5</sup> European Commission, SWD(2024) 77 final, First annual report on key findings from the European Monitor of Industrial Ecosystems (EMI), 14 February 2024. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52024SC0077>

<sup>6</sup> HAEC, COM(70)100, La politique industrielle de la Communauté, 1970; HAEC, COM(78) Report on structural aspects of growth, 22 June 1978.

<sup>7</sup> In this policy chapter, the term “EU” will be used to refer to the various European Communities (ECSC, Euratom, EEC) in place until the entry into force of the Maastricht Treaty in November 1993 and the European Union to make the text easier to read.

<sup>8</sup> Traité instituant la Communauté européenne du charbon et de l’acier, 1951. <https://eur-lex.europa.eu/legal-content/FR/TXT/?uri=celex%3A11951K%2FTXT>

For other sectors, except for the nuclear sector regulated by the Euratom Treaty, no such provisions to apply an interventionist EU industrial policy existed. The EEC Treaty made no explicit reference to the establishment of an EU industrial policy and contained no specific provisions on the subject. It was a legal text that established a framework for action that was flexible enough to adapt to the different economic approaches advocated by European governments (Noël, 1979, p. 33; Warlouzet, 2019, p. 81). As a result, industrial policy remained largely a national competence within the European Union until the onset of the economic crisis in the 1970s (Bussière, 2014; Warlouzet, 2008). Policies to promote national champions were pursued by the various Member States, with little coordination between them (Defraigne, 2004). At the same time, State aid was granted to European industry in the 1950s and 1960s and mergers between companies took place without strong control from the Commission (Zurstrassen, 2022, 2023; Warlouzet & Witschke, 2012). The European market remained nationally fragmented before the 1980's when the Commission made significant progress towards completing the common/single market (Bussière, 2014; Warlouzet, 2019b).

During the same period, Japan and the United States applied active industrial policies to strengthen the competitiveness of their national companies. In the first country, the MITI (Ministry of Trade and Industry) had broad powers of intervention. It could provide administrative guidance to influence the investments of Japanese firms, direct investment subsidies, accelerated depreciation, tax breaks and other incentives to selected industries (Johnson, 1982; Hart, 1992). At the same time, it could control all foreign exchange and imports of products and technology. Every foreign investor wishing to license the technology, share patents or acquire a share in a Japanese company had to receive approval from the MITI supervised Foreign Investment Committee (Vestal, 1995, p. 25; Flath, 2005, p. 196). Also, the MITI could order the creation of rationalisation cartels and industrial conglomerates financed by the State (Johnson, 1982; Hart, 1992). Finally, the Japanese industry could count on a large system of public banks to finance its investments. For example, the Japanese Development Bank, created in 1951 and under the supervision of the Ministry of Finance, could borrow funds, issue its own bonds and provide loans to national companies (Millestein & Zysman, 1983; Suzuki, 1988). These interventionist industrial strategies significantly boosted the competitiveness of Japan's basic industries in the 1950s and 1960s (steel, shipbuilding), followed by their high-tech sectors from the 1970s onwards (Hart, 1992; Krugman, 1986; Yonekura, 1994).

In the US, the industry could benefit from the intervention of the Department of Defence's public agencies and no legal restriction on public funding. The Defense Advanced Research Projects Agency (DARPA) and the National Aeronautics and Space Administration (NASA) developed key dual-technology projects which allowed for the significant development of US high-tech industries in the 1950s and 1960s (Dertouzos et al., 1989). Combined with the effects of scale, thanks to the existence of the world's largest domestic market, a very skilled workforce, and a high per capita income, the public agencies' intervention led the US high-tech companies to significantly increase their foreign direct investment and rapidly dominate the world market (Dertouzos et al., 1989). At the end of the 1960s, the US duopoly - IBM and Honeywell - dominated 70% of the European market and increased the number of their subsidiaries in the continent, leading the European industry to greatly depend, in the technological sector, on these companies.<sup>9</sup>

### **1.3. The partial failure of the attempt to catch up with the United States and Japan (1968-2010)**

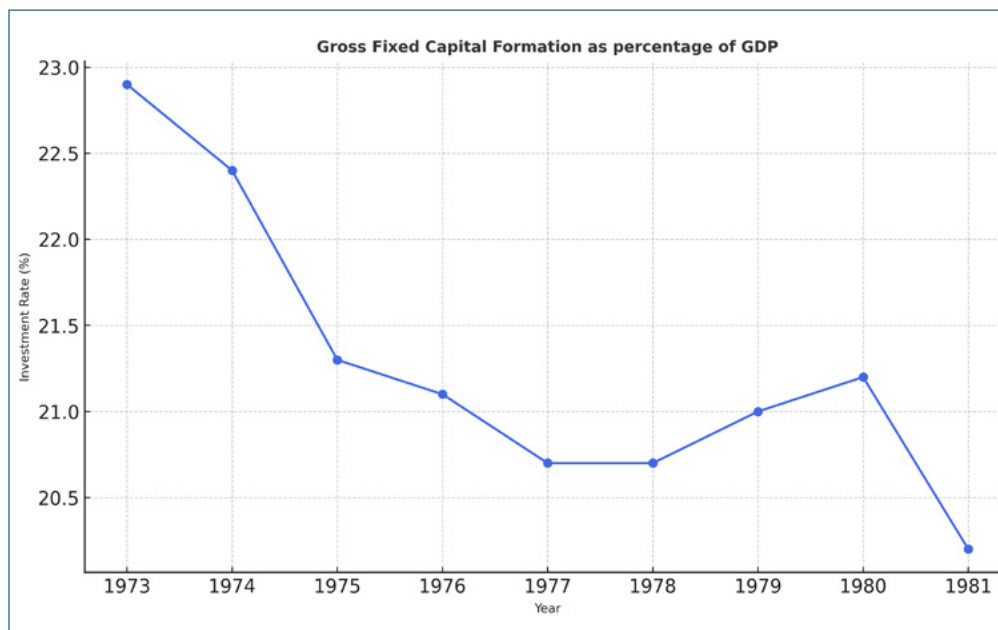
The intensification of foreign competition between the 1960s and the 1980s and the effects of the economic crisis on European industry led the EU institutions to formulate new industrial policy tools. From the mid-1970s, new research programmes, such as the multiannual framework programmes, ESPRIT (for the IT industry) or RACE (for telecommunications) programmes (Van Laer, 2007), were created. Unlike the Japanese and US programmes, these were open to companies from third countries, the only condition being that they had to operate in Europe.<sup>10</sup> At the same time, to fill the investment gap between Japan and the US, in 1978

<sup>9</sup> HAEC, COM(70) 100, La politique industrielle de la Communauté, 1970.

<sup>10</sup> HAEC, COM(79) 650, European Society faced with the challenge of new information technologies: A Community response, 26 November 1979; HAEC, INV 15/2019 487, Note from F. Danis (Cabinet Davignon). Compte rendu de l'entretien de M. Davignon avec M. Maisonrouge le 25 janvier 1980, 29 January 1980.

the Commission created a “New Community instrument” to enable the institution to borrow up to a maximum of ECU 1 billion to finance investment projects enabling national economic policies to converge.<sup>11</sup> Initially focused on the infrastructure and energy sectors, in 1982 its use was extended to all productive investments.<sup>12</sup> In parallel, the acceleration of the completion process of the Single Market was promoted to increase the size of European companies and the level of their investment. Also, it led to the creation of standards at EU level, favouring preferential access to the Single Market for European firms (Zurstrassen, 2023).

Figure 1.1: Evolution in the rate of fixed investment (gross fixed capital formation/GDP in %) in the Community between 1973 and 1981



Source : Zurstrassen, 2023.

The corollary of this strategy was the strengthening of EU competition policy. Special sectoral frameworks were adopted to make the granting of State aid to traditional industries (shipbuilding, steel, textile) conditional on enabling firms to make the necessary adjustments to increase their competitiveness. State aid for high-tech sectors was authorised in principle and subsidies for the promotion of R&D limited in intensity and at the pre-competitive stage (Zurstrassen, 2023). At the same time, there was intense action from the Commission to dismantle national monopolies in strategic industries such as telecommunications (Thatcher, 2001; Baskoy, 2008). Finally, protectionist trade policies were gradually abandoned in the 1980’s in favour of policies more focused on the liberalisation of third-country markets and the fight against unfair competition at the multilateral level (Zurstrassen, 2023). This resulted in a reinforcement of an EU anti-dumping law and a favourable approach to all foreign direct investment due to the benefits they would bring in terms of creation of jobs and economic growth (Zurstrassen, 2023). Also, FDI control at the EU level or the collection of information on FDI in the EU was rejected to avoid accusations of protectionism from third countries.<sup>13</sup> It led the Japanese industry to invest in the building of plants in strategic industries, such as the automotive industry, in countries more open to FDI such as the UK.<sup>14</sup> The consequence was the EU’s higher dependency on foreign actors for products and technology and the disappearance of existing national champions (Pardi, 2016).

The trend towards strengthening horizontal industrial policies and promoting a strategy of liberalising trade and strengthening competition policy continued within the European Union during the 1990s and 2000s. In line with the principles set out in its communications on industrial policy since 1990 and with the provisions of the Maastricht Treaty, the EU’s actions in this area were to remain horizontal. They aimed to create a favourable regulatory environment for business and industry activities and to strengthen ‘intangible’ factors such as inno-

<sup>11</sup> JO L 298 of 25 October 1978, Council decision 78/870/EEC of 16 October 1978 empowering the Commission to contract borrowings in order to promote investment within the Community, 25 October 1978.

<sup>12</sup> JO L 78/19, Council Decision 82/169 of 15 March 1982 empowering the Commission to contract loans for the purpose of promoting investment within the Community, 25 October 1978.

<sup>13</sup> HAEC, BAC 44/ 04 307, Note from Alexis Jacquemin to President Delors. Bref bilan des premières réunions du GISE, 27 September 1990.

<sup>14</sup> HAEC, II/200/89, 1992 : Investissements étrangers et délocalisations, 1989.

vation and human capital (Zurstrassen, 2023). The consequence of adopting this approach was the decision to put an end to the ECSC treaty in the 1990s without creating new industrial policy tools to strengthen the competitiveness of EU industry (Zurstrassen, 2022; Cohen & Lorenzi, 2000). In terms of competition policy, the 1990s and 2000s saw the continuation of the strategy of tightening EU control on sectoral State aid, relaxing the loosening of the European discipline on the supervision of horizontal subsidies (aimed at promoting R&D, environmental protection, vocational training), but also in favour of SMEs (Dimitri Zurstrassen, 2023).

The results of the EU's industrial policy strategy between the second half of the 1970s and the beginning of the 2000s are mixed. If manufacturing output in the EU grew substantially in real terms from the 1990s to the 2000s,<sup>15</sup> in terms of investment in plant and equipment, the EU failed to catch up with the US in the 1990s in terms of technological innovation.<sup>16</sup> In addition, the gap in productivity growth widened with the US from the mid-1990s.<sup>17</sup> This was particularly due to the weak investment in ICT in the EU compared to the US and the strong performance of this sector in the latter country.<sup>18</sup> Also, if the restructuring policies of the basic sectors (shipbuilding, steel, textiles) and ECSC interventionist tools allowed these sectors to be more competitive in front of developing countries at the end of the 1990s, the dominant position of the Asian countries' industries in many segments of shipbuilding widened. Finally, the privatisation process led to an increasing dependence on the strategy of foreign actors like Mittal Steel with major consequences for European industrial facilities and employment in the 2000s and 2010s (Zurstrassen, 2022).

In the IT and electronic sectors, the share of the world market held by European companies in the sector and the trade balance for high technology products fell sharply between the second half of the 1980s and the 2000s.<sup>19</sup> Also, foreign technology dependency increased. One of the reasons for this is that the catch-up strategy initiated by the Commission in the 1970s and 1980s was implemented too late to be successful. This delay was caused by the Member States' opposition to transferring powers to the Commission in these strategic sectors and the rivalries between the European companies during the 1970s (Van Laer, 2010; Griset, 2019). When the EU succeeded in designing a comprehensive strategy for the high-tech sectors in the first half of the 1980's, the market was dominated by Japanese and US companies thanks to their industrial targeting strategies.<sup>20</sup>

In addition, the need for EU companies to rapidly acquire the necessary technology to face increased world competition in the sectors forced them to sign technological cooperation agreements with Japanese and US companies throughout the 1980s and 1990s, to the detriment of cooperation between EU companies (Jacquemin, 1991; Cohen & Lorenzi, 2000, p. 115). The latter were minor partners in most of those agreements, creating a high level of technological dependence, with an important risk for the EU's economic security and jeopardising the competitiveness of the European industry.<sup>21</sup>

While research programmes have made it possible to boost the competitiveness of European industry overall and increased cooperation between companies (Carocostas & Muldur, 1998), the technological investment efforts in the EU did not result in innovation and commercial success compared with the US and Asian economies (Muldur, 2000). In the telecommunications sector, the strategy of defining global standards is considered a success, since the GSM standard promoted by the Commission has been adopted globally (Eckert, 2024). However, the destruction of the historic national monopolies and the adoption of a strict approach in terms of merger policy led to a fragmentation of the market (Cohen & Buigues, 2014, p. 286).

<sup>15</sup> European Commission, SEC(2005) 1215, Annex to the Commission communication Implementing the Community Lisbon Programme, 17 October 2005.

<sup>16</sup> European Commission, COM(2002) 714 final, Industrial Policy in an Enlarged Europe, 11 December 2002.

<sup>17</sup> European Commission, COM(2002) 262 final, Annual economic review 2003.

<sup>18</sup> European Commission, Annual EU economic reviews 2001, 2003.

<sup>19</sup> European Commission, COM(2000) 6, Towards a European Research Area, 18 January 2000.

<sup>20</sup> HAEC, BAC 344/99 133, Background Note from Jean-François Marchipont. Conseil "industrie" du 15.10.1990, 9 October 1990.

<sup>21</sup> HAEC, DG XIII-1, Strategic Dependency and Corporate Alliances, 29 June 1990.

## 1.4. The European Union in the face of Chinese industrial competition: the same strategy for further deindustrialisation and technological dependency (2000-today)

### 1.4.1. The EU and the geopolitical changes of the 2000s: the mixed results of the horizontal and open industrial policy strategy

During the 1990s and early 2000s, liberalisation programmes continued in Europe. European leaders envisioned Europe as a knowledge-based economy with sustainable economic growth and more and better jobs.<sup>22</sup> This meant outsourcing the labour-intensive and dirty jobs in manufacturing. Call centre tasks and IT services were mostly outsourced to India because of the good command of the English language and low wages in India, and labour-intensive jobs were outsourced to countries with low wages in East Asia. India emerged as a global power in services, while China became ‘the Factory of the World’. The EU promoted a trade policy strategy to open international markets and strengthen the multilateral system. The European Commission was one of the strongest promoters of the accession of China to the WTO in 2001, aiming to reduce their protectionist policies by complying with multilateral rules (Christiansen et. al., 2019).

The strengthening of the Chinese manufacturing base was the result of a long-term strategy to achieve industrial and technological self-sufficiency (Ling & Naughton, 2016). In 1978, Deng Xiaoping announced the “Open Door Strategy” to attract foreign capital and businesses. At first, most capital and businesses were from the neighbouring regions: Hong Kong, Macau and Taiwan. European companies that had outsourced their production to these regions before were attracted to this new low-wage country. First, it was for production for the home market, but when the Chinese economy started to flourish, western investors noticed the enormous potential of the Chinese consumer market. In exchange for access to the Chinese market, European firms were willing to share some of their technological know-how, firmly believing that Chinese firms would never catch up “because the Chinese were not innovative” (Abrami et al., 2014).

The rise of inward FDI significantly increased the competitiveness of Chinese companies, because Deng Xiaoping had introduced elements of capitalism without giving free rein to the market. He had seen in other countries that were forced to open their markets in exchange for IMF loans that foreign companies would quickly outcompete local companies. Therefore, foreign companies with advanced technologies could only start a business in China by establishing a joint venture with a Chinese company in which the foreign company could only have a minority share. This way, Chinese engineers could work closely together with foreign engineers and acquire new knowledge. The moment a Chinese firm managed to develop a similar product, the Chinese government forced Chinese firms to buy the locally produced product and made it expensive to import similar foreign products (Arthur R. Kroeber, 2016). This copycat strategy helped Chinese companies to leapfrog and to avoid foreign firms taking over the Chinese market. Deng Xiaoping combined some elements of capitalism with a socialist planning strategy through the implementation of five-year plans (in effect from four years after the establishment of the People’s Republic of China in 1949 to now) and the granting of large subsidies to promote the domestic industry. This opening-up strategy in combination with state planning and state support led China to become the most important supplier (by value) of textiles and clothing to the European Union in the 1990s<sup>23</sup> and the world’s largest steel producer (In der Heiden, 2013). The moment Chinese companies were able to compete with foreign companies, the market was opened for wholly foreign-owned companies (Carlo Fischione et al., 2024; Sanne Van Der Lugt, 2018).

<sup>22</sup> European Council, Conclusions of the Lisbon European Council, 23 and 24 March 2000.

<sup>23</sup> European Commission, General report on the activities of the European Union 1995, 1996. <https://op.europa.eu/en/publication-detail/-/publication/b0879619-0be3-4a3e-af29-5cec7e99c5c3/language-en>

After 5 years of implementation, the Lisbon Strategy did not deliver the expected results. The employment rates in the EU, even if they increased during the decade, remained below the targets set. Labour productivity also did not increase to the expected levels because of weak investment and a slow factor productivity growth rate.<sup>24</sup> Some of the major problems with this strategy were the existence of too many targets, their voluntary nature and conflicting priorities (Kok, 2004: 6). At the same time, the Single Market remained fragmented due to the general “single market fatigue” in the 2000s (Monti, 2010). Finally, in the automotive sector, national industrial policy and specific companies’ choices led the EU industry to keep combustion engines, while CO2 emissions targets defined in 1999 were not reached (Klebaner and Ramirez-Perez, 2022: 316; Rugraff, 2019).

#### 1.4.2. The 2010s: an EU industrial policy strategy ill-suited to the Chinese expansionist industrial policy strategy

The effects of the 2007-2008 world economic and financial crisis on European industry and the rising competition from emerging economies posed a new challenge to the EU’s industrial policy strategy. The economic downturn led to a significant decrease in demand and the EU’s industrial production.<sup>25</sup> Towards the end of the 2000s, emerging economic powers like Brazil, China and India were closing the gap with industrialised countries in terms of productivity and innovation. China, in particular, significantly increased its shares in high-skill industries and its exports of these products to the EU during that period.<sup>26</sup>

The EU’s response to these challenges was the Europe 2020 strategy adopted in 2010. Like the Lisbon Strategy, it contained various non-legally binding targets to be transposed into national objectives.<sup>27</sup> These were to be achieved through the application, as before, of horizontal industrial policy measures, a strict sectoral State aid policy control and an open trade policy strategy. Priority industrial sectors for EU intervention were defined in the first half of the 2010s to which horizontal measures were to be applied.<sup>28</sup> New funds, like the European Fund for Strategic Investment (EFSI), were also created to increase the level of investment of companies after its decrease during the economic and financial crisis. However, these funds mobilised only existing EU funds. The EFSI, for example, mobilised small available resources from the EU budget (€16 billion) and the EIB’s funds (€5 billion), which were to attract €300 billion in additional investment.<sup>29</sup> Even when the objective set was achieved in 2018,<sup>30</sup> the amount of mobilised investment was insufficient to cover the needs for the dual transition and the strengthening of the competitiveness of European industry (Sapir et al., 2014; Rubio, 2016).

The contrast between the EU’s industrial policy strategies and the tools used by the Chinese government at the time is striking. In China, a global industrial strategy was designed since the global economic and financial crisis to alleviate its effects on Chinese firms and reach industrial and technological sovereignty. It included, first, measures to stimulate investment after the financial crisis: a RMB ¥4 trillion (+/- €500 billion) stimulus package. This provided Chinese companies with experience in realising large-scale infrastructure projects, but it also led to the creation of large industrial overcapacities. To deal with this problem, among other solutions, the Chinese government launched in 2013 the One Belt, One Road Initiative (BRI) (which later became the Belt and Road Initiative (BRI)), allowing the country to deploy some of that excess capacity abroad. The aim was also for China to strengthen ties with the neighbouring countries tempted by closer cooperation with the EU and the USA.

The Made in China 2025 (MIC2025) strategy, launched in 2015, for its part, aimed to transform the country from being the ‘Factory of the World’ (producing cheap, low-quality goods due to lower labour costs and supply chain advantages) to an ‘innovation-driven’ production of higher-value products and services (Dufour, 2019). To achieve this, the Chinese government selected key technologies and industries to focus its policies on. High-tech companies in these industries received tax benefits, and the state funded R&D and encouraged mergers and acquisitions of foreign technology firms in these industries. The ambitious objective of MIC2025 is to ultimately conquer foreign markets globally (Defraigne, 2022; Dufour, 2019).

<sup>24</sup> European Commission, COM(2006) 697 final, European competitiveness report, 2006.

<sup>25</sup> European Commission, COM(2010) 614 final, An Integrated Industrial Policy for the Globalisation Era Putting Competitiveness and Sustainability at Centre Stage, 28 October 2010.

<sup>26</sup> European Commission, European Competitiveness Report 2009, 2009.

<sup>27</sup> European Commission, COM(2010) 2020 final, Europe 2020. A Strategy for Smart, Sustainable and Inclusive Growth, 3 March 2010.

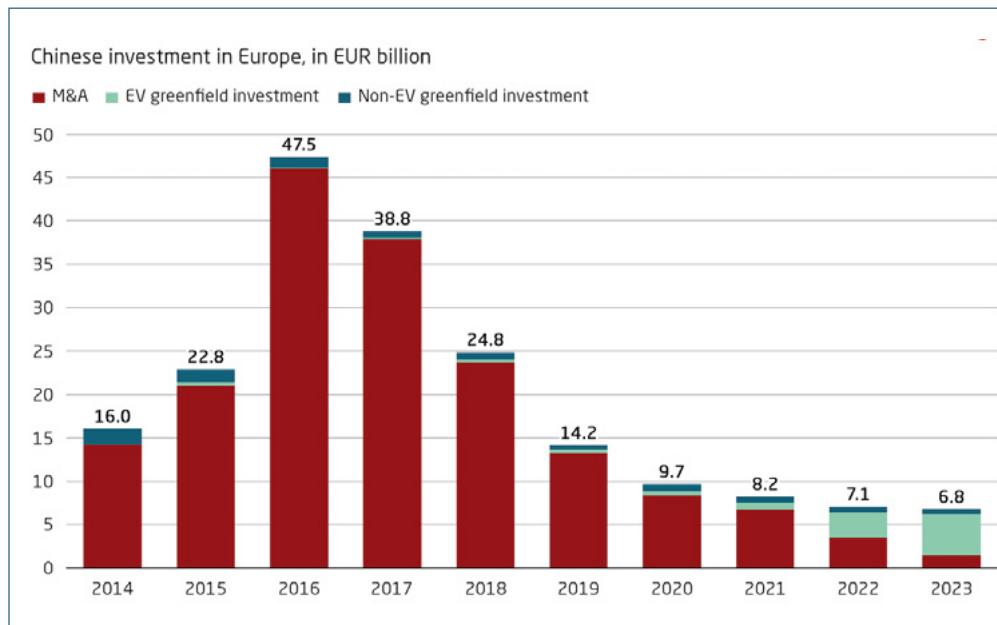
<sup>28</sup> European Commission, COM(2012) 582 final, A Stronger European Industry to Drive Growth and Economic Recovery, 10 October 2012.

<sup>29</sup> European Commission, COM(2014) 903 final, An investment plan for Europe, 26 November 2014.

<sup>30</sup> [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_18\\_4469](https://ec.europa.eu/commission/presscorner/detail/en/IP_18_4469)

This Chinese expansionist industrial strategy led to a significant rise in Chinese FDI in the EU. While European investment flows into China historically outpaced Chinese outbound flows, the tide has turned rapidly since 2014.<sup>31</sup> In 2018, Bloomberg reported that, according to their research, approximately 360 European companies had been taken over by Chinese firms between 2008 and 2018, from Italian tire maker Pirelli & C. SpA to Irish aircraft leasing company Avolon Holdings Ltd.<sup>32</sup> By 2018, Chinese entities also partially or wholly owned at least four European airports, six seaports, wind farms in at least nine countries and 13 professional football teams.<sup>33</sup> In 2016, greenfield Chinese investment in the EU was more than four times higher than European FDI in China. But the share of Chinese FDI in Europe, at 2.2 per cent, remained low relative to the United States' 38 per cent and Chinese investments in Europe rapidly declined after their peak in 2016.

Figure 1.2: Chinese investments in Europe, in EUR billion



Source: Rhodium Group & MERICS, 2023<sup>34</sup>

The peak in 2016 can be explained by the financial crisis and the political responses to it in Europe. In Southern Europe, Chinese companies have leveraged the economic crisis and its consequences to focus on large-scale privatisation processes and post-crisis restructuring. In Western Europe, Chinese investors targeted struggling tech companies and research and development networks.<sup>35</sup> According to a study by the Bertelsmann Foundation, 64 per cent of the German companies sold to China between 2014 and 2017 belonged to the sectors prioritised by the MIC2025 strategy (Jungbluth, 2018, p. 17).

<sup>31</sup> See “China Going Global Investment Index 2015”, Economist Intelligence Unit, available at: [https://www.eiu.com/public/topical\\_report.aspx?campaignid=chinaodi2015](https://www.eiu.com/public/topical_report.aspx?campaignid=chinaodi2015)

<sup>32</sup> See “China’s Empire of Money Is Reshaping Europe”, Bloomberg, available at: <https://www.bloomberg.com/graphics/2018-china-business-in-europe/>

<sup>33</sup> See “China’s Empire of Money Is Reshaping Europe”, Bloomberg, available at: <https://www.bloomberg.com/graphics/2018-china-business-in-europe/>

<sup>34</sup> <https://merics.org/en/report/dwindling-investments-become-more-concentrated-chinese-fdi-europe-2023-update>

<sup>35</sup> See “Mapping China’s Investments in Europe”, The Diplomat, 14 March 2019, available at: <https://thediplomat.com/2019/03/mapping-chinas-investments-in-europe/>

Table 1.1: List of acquisitions of strategic EU companies by Chinese firms (2010-2020)

Year	Sector	EU Company Acquired	Chinese Firm	Share
2012	Car industry	NEVS	SAAB	100%
2013	Defense	Ziegler GmbH	CIMC	100% The Chinese State owns 54 percent of the shares of CIMC.
2015	Semiconductors	RF Power Division	Beijing Jianguang Asset Management Co., Ltd (JAC)	100% acquired for \$1.8 billion
2015	Semiconductors	Bipolar Power Device (RENESAS)	Beijing Jianguang Asset Management Co., Ltd (JAC)	Joint control
2016	Robotics	Kuka	Midea	100% since 2022
2017	Semiconductors	Standard Products Division	JAC, Wise Road Capital	100% (division)
2017	Agriculture	Syngenta	ChemChina	100%
2018	Semiconductors	Nexperia	Wingtech Technology partially state-owned Chinese company.	100%
2018	Car industry	Daimler Benz (Daimler AG)	Zhejiang Geely Holding Group's (owns already Volvo and Lotus)	Stake=10%
2024	Car industry	OSA Peugeot Citroen	Donfgeng Motor Group	14%

Source: LUHNIP's elaboration based on authors' research.

The combination of China's industrial policies since 1978 (forced joint ventures with Chinese firms, forced to buy homegrown, stimulating Chinese companies to acquire advanced technology by buying foreign companies and to invest heavily in R&D for strategic technologies) also enabled its companies to advance rapidly and outpace Europe and the US in most strategic technologies (Australian Strategic Policy Institute, n.d.). Good examples of industries in which Chinese companies made rapid advances and outperformed EU and US companies are: telecom equipment, electric vehicles, V2X, MRI, and solar panels (Carlo Fischione et al., 2024; Hyun Jin Julie Yu et al., 2014; Sanne Van Der Lugt, 2018; Sanne Van Der Lugt et al., 2023).

## 1.5. Conclusions and policy recommendations

The analysis of the evolution of the EU's industrial policy strategies in the face of external competition from the 1960s to 2019 provides several lessons for the future. First, the strategy to rely, essentially, on EU companies' strategies and indicative and voluntary targets for the adaptation of Member States's industrial policies did not allow European companies to sufficiently improve their competitiveness to mitigate foreign competition. History shows that the EU needs a long-term industrial strategy based on the strengthening of horizontal industrial policy tools, but also the implementation of a "smart planning" strategy to allow for the twin transition of its companies and reduce industrial and technological dependence.

To solve this problem, we first recommend the European Commission to set up an inter-DG task force to track the evolution of industrial strategies of the main economic powers' companies and governments. This task force should analyse the strategies announced by the global economic powers and identify the strategic and vital industry processes in the EU that need to be protected and supported. Furthermore, this task force should especially identify what the big powers need from the EU (for example: EUV and DUV-machines from ASML, TNT from Poland, etc.), so that the EU knows what to protect and how to strengthen its negotiation position in cases of trade disputes.

At the same time, the EU should strengthen its industrial policy tools to be able to compete with China and the US. Our analysis shows that the lack of investment in strategic European industries has been a recurrent problem since the 1970s that has never been completely solved. The urgent need to mobilise investment for European industry to meet the current challenges (Draghi, 2024) should not only be resolved with market-based solutions (the creation of a Capital Markets Union), but also by strengthening the coordination of the companies' investment strategies and the public financial instruments at the EU level. The ECSC model, which provided for the Commission to give its opinion on companies' investment projects and helped to fund them based on five-year EU industrial policy objectives, should be a source of inspiration to face today's challenges. Just like EU national governments and the EU's economic competitors, the European Commission should be able to subsidise European industries with the creation of new own resources or the reinforcement of the EU budget, which would allow the EC to achieve EU-wide objectives, reach the necessary level of investment and avoid the fragmentation of the Single Market. The possibility for the Commission to issue opinions on company investments (non-binding but conditional on European funding) based on the work of the new intra-DG task force would make it possible to avoid investments not meeting the EU objectives.

Finally, if it is essential for the EU to continue to promote open markets and multilateral solutions, it should apply the reciprocity principle more consistently when competitors adopt interventionist industrial and protectionist trade policies. The EU's current open strategic autonomy scheme to remain "open but act autonomous if necessary"<sup>36</sup> must be rigorously applied to avoid the deindustrialization and greater external dependency of European industries. To achieve this objective, we propose the application of automatic safeguard clauses by the European Commission on foreign imports when the EC perceives a risk of unfair competition. Further action or the cancellation of action will then have to be confirmed as quickly as possible by the European Commission and the Council of the EU.

<sup>36</sup> European Commission, COM (2021) 66 final, Trade Policy Review – An Open, Sustainable and Assertive Trade Policy, 18 February 2021.

## References

- Abrami, R. M., Kirby, W. C., & McFarlan, W. (2014). Why China can't innovate, Harvard Business Review. <https://hbr.org/2014/03/why-china-cant-innovate>
- Australian Strategic Policy Institute. (n.d.). Critical technology tracker: Two decades of data show rewards of long-term research investment. The Strategist. <https://www.aspistrategist.org.au/critical-technology-tracker-two-decade-data-shows-rewards-of-long-term-research-investment/>
- Baskoy, T. (2008). The political economy of European Union competition policy: A case study of the telecommunications industry. Routledge.
- BusinessEurope. (2024). Reboot Europe: Stronger businesses for a stronger European Union. <https://www.besnesseurope.eu/publications/reboot-europe-stronger-businesses-stronger-european-union>
- Carocostas, P., & Muldur, U. (1998). La société, ultime frontière: Une vision européenne des politiques de recherche et d'innovation pour le XXIème siècle. Commission Européenne.
- Cohen, E., & Buigues, P.-A. (2014). Le décrochage industriel. Fayard.
- Cohen, E., & Lorenzi, J.-H. (2000). Des politiques industrielles aux politiques de compétitivité en Europe. In E. Cohen & J.-H. Lorenzi, Politiques industrielles pour l'Europe. La Documentation Française.
- Defraigne, J.-C. (2004). De l'intégration nationale à l'intégration continentale: Analyse de la dynamique d'intégration supranationale européenne des origines à nos jours. l'Harmattan.
- Defraigne, J.-C. (2022). China's industrial policy: The visible hand of the party-state to catch up by any means necessary. In J.-C. Defraigne, E. Traversa, J. Wouters, & D. Zurstrassen (Eds.), EU industrial policy in the multipolar economy (pp. 242-269). Edward Elgar Publishing.
- Dertouzos, M. L., Lester, R. K., & Solow, R. M. (1989). Made in America: Regaining the productive edge. HarperPerennial.
- Draghi, M. (2024). The future of European competitiveness. European Commission. [https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead\\_en](https://commission.europa.eu/topics/strengthening-european-competitiveness/eu-competitiveness-looking-ahead_en)
- Eckert, D. (2024). 40 years of European digital policies: Forgotten lessons. Springer.
- ERT. (2024). Competitiveness and Industry Benchmarking Report 2024. <https://ert.eu/bmr2024/>
- Flath, J. (2005). The Japanese economy. Oxford University Press.
- Fischione, C., Van Der Lugt, S., & Van der Putten, F.-P. (2024). Artificial intelligence: AI for medical imaging: MRI scanners and the roles of Philips and Siemens in China. In Digital Power China (pp. 102- 111). <https://dgap.org/en/research/publications/reverse-dependency-making-europes-digital-technological-strengths>
- Griset, P. (2019). Au coeur du numérique: La France et ses politiques face aux mutations technologiques des années 1980. In G. Saunier (Ed.), Mitterrand: Les années d'alternance 1984-1986 et 1986-1988 (pp. 537-573). Nouveau Monde Editions.

Hart, J. A. (1992). *Rival capitalists: International competitiveness in the United States, Japan, and Western Europe*. Cornell University Press.

Jacquemin, A. (1991). Stratégie d'entreprise et politique de concurrence dans le Marché Unique Européen. *Revue d'économie industrielle*, 57, 7–24.

Johnson, C. (1982). *MITI and the Japanese miracle: The growth of industrial policy, 1925-1975*. Stanford University Press.

Jungbluth, C. (2018). Kauft China systematisch Schlüsseltechnologien aus? Chinesische Firmenbeteiligungen in Deutschland im Kontext von "Made in China 2025". Bertelsmann Stiftung.

Keck, J., Vanoverbeke, D., & Waldenberg, F. (2013). *EU-Japan relations 1970-2012*. Routledge.

Kroeber, A. R. (2016). *China's economy: What everyone needs to know*. Oxford University Press.

Krugman, P. R. (1986). *Strategic trade policy and the new international economics*. MIT Press.

Letta, E. (2024). Much more than a market. <https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf>

Ling, C., & Naughton, B. (2016). An institutionalized policy-making mechanism: China's return to techno-industrial policy. *Research Policy*, 45(45), 2138–2152.

Millestein, J., & Zysman, J. (1983). US-Japanese competition in the semiconductor industry. *Policy Papers in International Affairs*.

Noël, E. (1979). *Les rouages de l'Europe*. Editions Fernand Nathan.

Pardi, T. (2016). Industrial policy and the British automotive industry under Margaret Thatcher. *Business History*, 59(1), 75–100.

Rubio, E. (2016). *L'investissement en Europe: Tirer le meilleur parti du Plan Juncker*. Notre Europe - Institut Jacques Delors. <https://institutdelors.eu/publications/investissement-en-europe-tirer-le-meilleur-parti-du-plan-juncker/>

Sapir, A., Wolff, G., Claeys, G., & Hüttl, P. (2014, November 25). Measuring Europe's investment problem. Bruegel. <https://www.bruegel.org/blog-post/measuring-europes-investment-problem>

Suzuki, Y. (1988). *The Japanese financial system*. Clarendon Press.

Thatcher, M. (2001). The Commission and national governments as partners: EC regulatory expansion in telecommunications 1979–2000. *Journal of European Public Policy*, 8(4), 558–584.

Van Laer, A. (2007). Quelle politique industrielle pour l'Europe? Les projets des Commissions Jenkins et Thorn (1977-1984). In É. Bussiere, M. Dumoulin, & S. Schirmann (Eds.), *Milieus économiques et intégration européenne au XXème siècle: La relance des années quatre-vingt* (pp. 23–25). CHEFF.

Van Laer, A. (2010). *Vers une politique industrielle commune: Les actions de la Commission européenne dans les secteurs de l'informatique et des télécommunications (1965-1984)*. [Doctoral dissertation, Université Catholique de Louvain].

Van Der Lugt, S. (2018). *Re-evaluating the impact of institutional distance on the location choice and success of foreign investors: Chinese and Western investors in China* [Doctoral dissertation, University of Leiden].

Van Der Lugt, S., Rojas, R., & Van der Putten, F. (2023). Europe's strategic technology autonomy from China: Assessing foundational and emerging technologies. In *Digital Power China* (pp. 91-103).

Vestál, J. E. (1995). *Planning for change: Industrial policy and Japanese economic development, 1945-1990*. Oxford University Press.

Warlouzet, L. (2008). Europe de la concurrence et politique industrielle communautaire: La naissance d'une opposition au sein de la CEE dans les années 1960. *Histoire, Économie & Société*, 1, 47-61.

Warlouzet, L. (2019a). The EEC/EU as an evolving compromise between French Dirigism and German Ordoliberalism (1957-1995). *Journal of Common Market Studies*, 57(1).

Warlouzet, L. (2019b). The internal market and competition. In V. Dujardin, E. Bussière, P. Ludlow, F. Romero, D. Schlenker, & A. Varsori (Eds.), *The European Commission 1986-2000: History and memories of an institution*. Publications Office of the European Union.

Warlouzet, L., & Witschke, T. (2012). The difficult path to an economic rule of law: European competition policy. *Contemporary European History*, 21(3), 437-455.

Yonekura, S. (1994). *The Japanese iron and steel industry, 1850-1990: Continuity and discontinuity*. Palgrave Macmillan

Yu, H.J.J. et. al. (2016), Solar photovoltaic energy policy and globalization: A multiperspective approach with case studies of Germany, Japan, and China. *Progress in Photovoltaics and Applications*, 24, 4, 458-476.