23. Missatges principals sobre política industrial segons l'OCDE

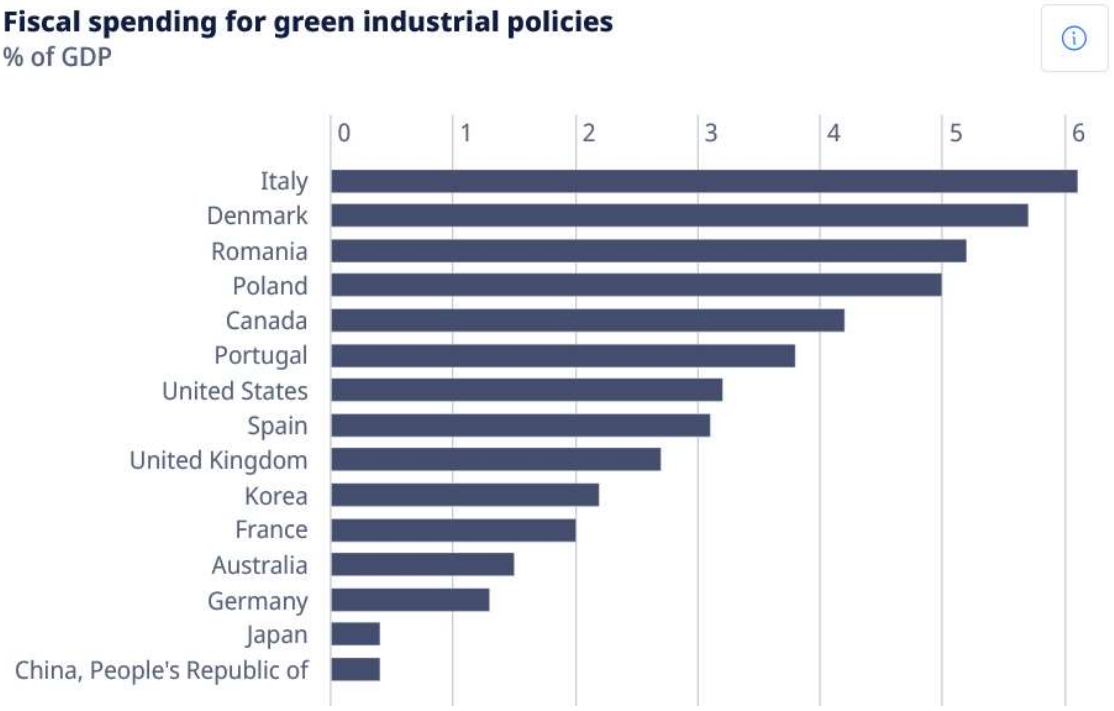
"Industrial policy refers to government assistance to businesses to boost or reshape specific economic activities, especially to firms or types of firms based on their activity, technology, location, size or age. Governments use industrial policies to address important economic, social and environmental challenges that markets cannot address on their own, such as to accelerate the green transition, or improve the robustness of value chains for critical products and services

- Industrial strategies need to have clear objectives. The OECD's conceptual framework for industrial policy uses a broad definition of industrial policy and considers a vast set of policy instruments, ranging from intellectual property protection to public support to improve workers' skills … The framework highlights two main dimensions of the formulation of industrial strategies: designing an industrial strategy and selecting policy instruments to execute that strategy.
- Industrial strategies are important tools but come with challenges and need to be evaluated. Sound policy making requires a clear view on what works and what does not. Leveraging the framework, the OECD provides a synopsis of the available empirical evidence on industrial policy instruments, including their complementarities and trade-offs.
- Policymakers need to understand industrial policy domestically as well as in partner countries. Measuring industrial policy expenditures is a first step towards ensuring transparency and accountability and enabling policy evaluation. It also supports cross-country comparability of industrial policies, facilitating international coordination on global challenges… This analysis across nine OECD countries found that industrial policies are sizable (1.4% of GDP on average). While there is a significant degree of heterogeneity in the format and priorities of this support, these expenditures are dominated by a sectoral approach. This sectoral support tends to support energy, transport, and manufacturing. Green instruments are increasingly important and are largely sector and/or technology specific.
- Industrial policies have a central role to play in accelerating the green transition. Green industrial policies are increasingly considered a necessary part of the solution to keeping climate targets within reach… Such policies can accelerate decarbonization by lowering constraints on access to finance, improving access to skills and infrastructure, reducing regulatory barriers for new entrants, stimulating demand for green products, and aiming to negate first-mover disadvantage. The key question … is how to design them effectively to help accelerate emissions reductions while minimising risks to competitiveness, inclusiveness, and economic efficiency."

https://www.oecd.org/en/topics/policy-issues/industrial-policy.html

Criscuolo, Chiara; Nicolas Gonnei; Kohei Kitazawai; Guy Lalanne (2022): "An industrial policy framework for OECD countries: Old debates, new perspectives", OECD Science, Technology and Industry Policy Papers, No. 127, OECD Publishing, https://doi.org/10.1787/0002217c-en.

Criscuolo, Chiara; Nicolas Gonnei; Kohei Kitazawai; Guy Lalanne (2022): "Are industrial policy instruments effective?: A review of the evidence in OECD countries", OECD Science, Technology and Industry Policy Papers, No. 128, OECD Publishing, https://doi.org/10.1787/57b3dae2-en.



24. Política industrial del Regne Unit

"… our plan for growth will focus on three pillars of investment … :

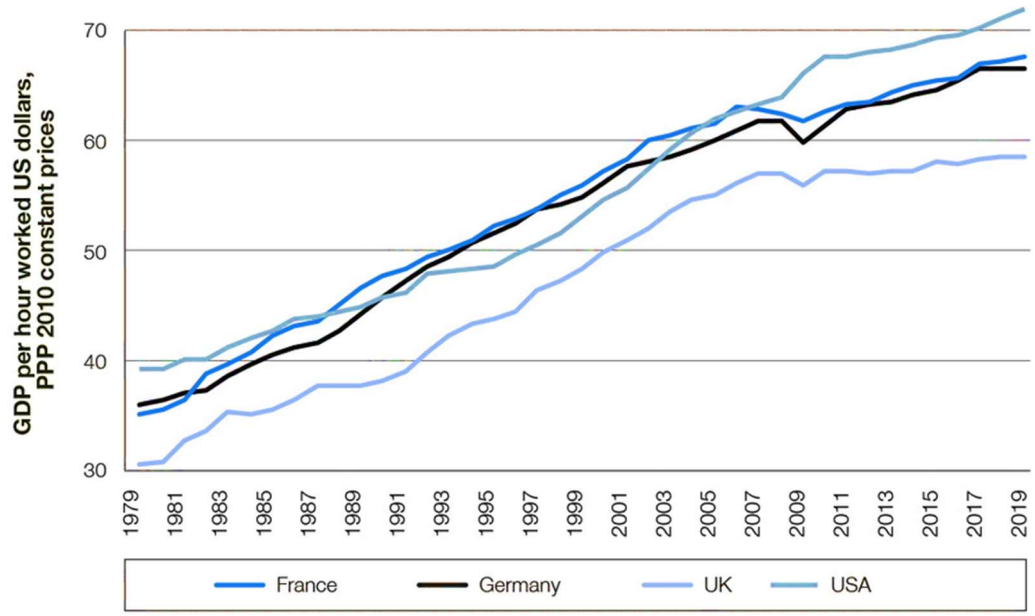
- High quality infrastructure is crucial for economic growth, boosting productivity and competitiveness. The UK has historically underinvested in infrastructure, but we are fixing that, starting with £100 billion of capital investment in 2021-22.
- The best way to improve people's life chances is to give them the skills to succeed. The UK has a strong foundation of advanced skills, but lags behind international comparators on technical and basic adult skills (…)
- Innovation drives economic growth and creates jobs. The UK has a world-leading research base, which will be boosted by the government's significant uplift in R&D investment and the creation of the Advanced Research & Invention Agency to fund high-risk, high-reward research (…) We will make the UK the best ecosystem in the world for starting and growing a business. That means having the best access to capital, skills and ideas, as well as a smart and stable regulatory framework.

In pursuing economic growth, this government will do things differently:

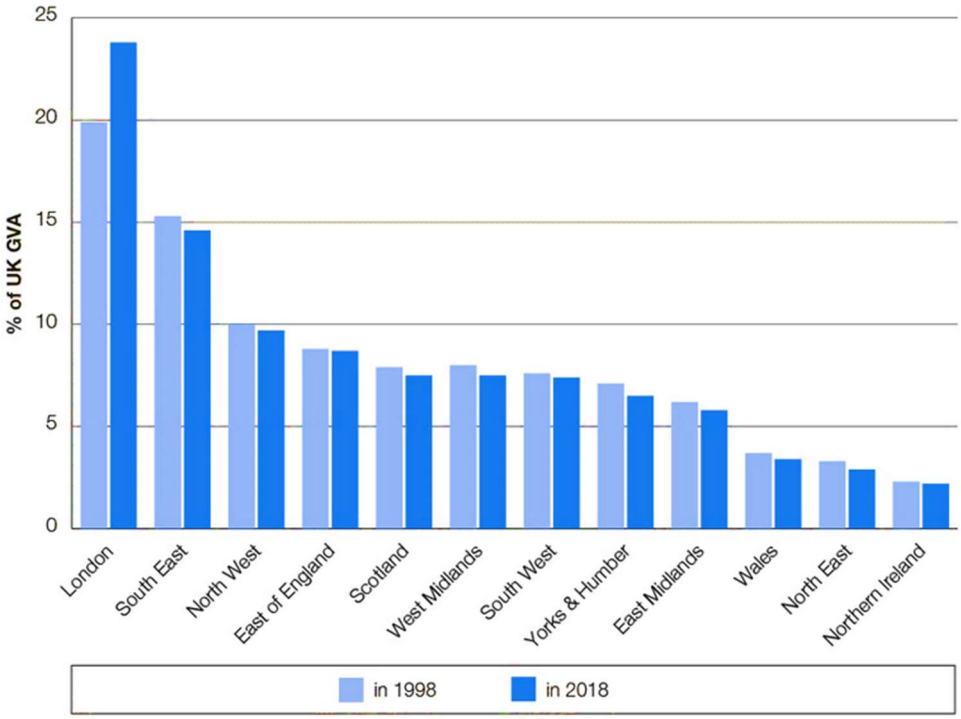
- Our most important mission is to unite and level up the country: tackling geographic disparities; supporting struggling towns to regenerate; ensuring every region and nation of the UK has at least one globally competitive city; and above all, strengthening the Union.
- We will drive growth that is green: delivering our Ten Point Plan for a Green Industrial Revolution and taking action to fulfil our commitment to be the first generation to leave the natural environment in a better condition than we found it."

https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth/build-back-better-our-plan-for-growth-html

GDP per hour worked in selected countries, 1979–2019



Relative contributions to national output of UK nations and regions



25. Política industrial de la UE

"The EU's industrial policy aims to strengthen the competitiveness of EU industry and to promote a more sustainable, resilient and digitalised economy that creates jobs.

EU industry accounts for:

- more than 20% of the EU economy
- around 35 million jobs
- 80% of the EU's goods exports.

EU industry holds a leading position in global markets for high-value-added products and services, such as pharmaceuticals, mechanical engineering, fashion. Thanks to its capacity for innovation, the EU is also a world leader in green technology and other high-tech sectors. EU industry leads by example, complying with the highest social, labour and environmental standards, in line with EU values."

"European industrial strategy. The EU aims to make its industries more competitive globally, and increase their autonomy and resilience. The EU relies on industry to lead the transitions towards climate neutrality and digital leadership. The aim is for EU industry to become an accelerator and enabler of change, innovation and growth (…) The European Commission then put forward a new industrial policy package in March 2020. In October 2020, the European Council reaffirmed the need to pursue an ambitious industrial policy to make EU industry more sustainable, resilient, green and competitive."

https://www.consilium.europa.eu/en/policies/eu-industrial-policy/

26. El Consell Europeu d'octubre de 2020 sobre política industrial de la UE

"The European Council is the EU institution that defines the general political direction and priorities of the European Union. The members of the European Council are the heads of state or government of the 27 EU member states, the European Council President [Charles Michel] and the President of the European Commission [Ursula von der Leyen]."

https://www.consilium.europa.eu/en/european-council/

"On 1 and 2 October 2020, the European Council adopted conclusions on COVID-19, the Single Market, industrial policy, digital and on external relations."

"The EU must pursue an ambitious European industrial policy to make its industry more sustainable, more green, more competitive globally and more resilient. The European Council invites the Commission to identify strategic dependencies, particularly in the most sensitive industrial ecosystems such as for health, and to propose measures to reduce these dependencies, including by diversifying production and supply chains, ensuring strategic stockpiling, as well as fostering production and investment in Europe. It calls for:

- ensuring a level playing field, and a regulatory environment and state aid framework that are conducive to innovation and facilitate the full involvement of SMEs;
- developing new industrial alliances, including on raw materials, medical equipment, microprocessors, secure telecommunication networks, low-carbon industries, and Industrial Clouds and Platforms;
- stepping up the assistance to the existing Important Projects of Common European Interest on Batteries and micro-electronics, and to those being developed by Member States and industry in the context of various alliances (such as on the Internet of Things, Clean Hydrogen), so as to overcome market failures and enable breakthrough innovation. The European Council invites the Commission to help the Member States develop new Important Projects of Common European Interest (…);

- developing EU autonomy in the space sector and a more integrated defence industrial base."

https://www.consilium.europa.eu/en/press/press-releases/2020/10/02/european-council-conclusions-1-2-october-2020/

27. Reglament europeu sobre la Indústria de Zero Emissions Netes, 27/05/24 (*Net-zero Industry Act*)

"The regulation aims to boost the industrial deployment of net-zero technologies that are needed to achieve the EU's climate goals, using the strength of the single market to reinforce Europe's position as a leader in industrial green technologies."

"The net-zero industry act is one of the three key legislative initiatives of the green deal industrial plan - together with the critical raw materials act and the electricity market design reform - to enhance the competitiveness of Europe's net-zero industry and support a rapid transition to climate neutrality."

"The net-zero industry act is one of the foundation stones of a new industrial policy. This legal act will help Europe to lead the global race for green technologies and make sure that our contribution to the fight against climate change also reduces our dependencies, reinforces our strategic autonomy and helps us to create growth and jobs in Europe."

"The net-zero industry act will create favourable conditions for investment in green technologies by:

- simplifying the permit-granting process for strategic projects
- facilitating market access for strategic technology products (in particular in public procurement or the auctioning of renewable energies)
- enhancing the skills of the European workforce in these sectors (i.e. with net-zero industry academies and high-concentration industrial areas or 'valleys')
- creating a platform to coordinate EU action in this area."

"Progress towards the objectives of the net-zero industry act will be measured by two indicative benchmarks. Firstly, manufacturing capacity of net-zero technologies, such as solar photovoltaic panels, wind turbines, batteries and heat pumps, reaching 40% of the EU's deployment needs. Secondly, a specific target for an increased Union share for these technologies with a view to reaching 15 % of world production by 2040.

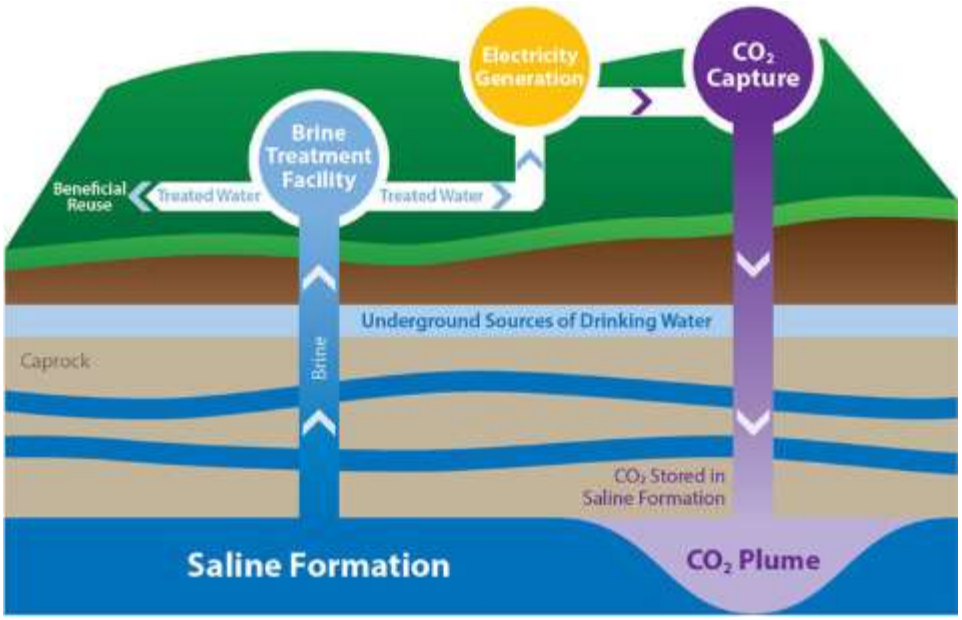
In addition, the net-zero industry act sets up an annual injection capacity of at least 50 million tonnes of CO2 to be achieved by 2030 in geological storage sites located in the territory of the Union."

https://www.consilium.europa.eu/en/press/press-releases/2024/05/27/industrial-policy-council-gives-final-approval-to-the-net-zero-industry-act/

28. Captura i emmagatzematge de CO2

"Carbon capture and storage (CCS) is the separation and capture of carbon dioxide (CO2) from the emissions of industrial processes prior to release into the atmosphere and storage of the CO2 in deep underground geologic formations.

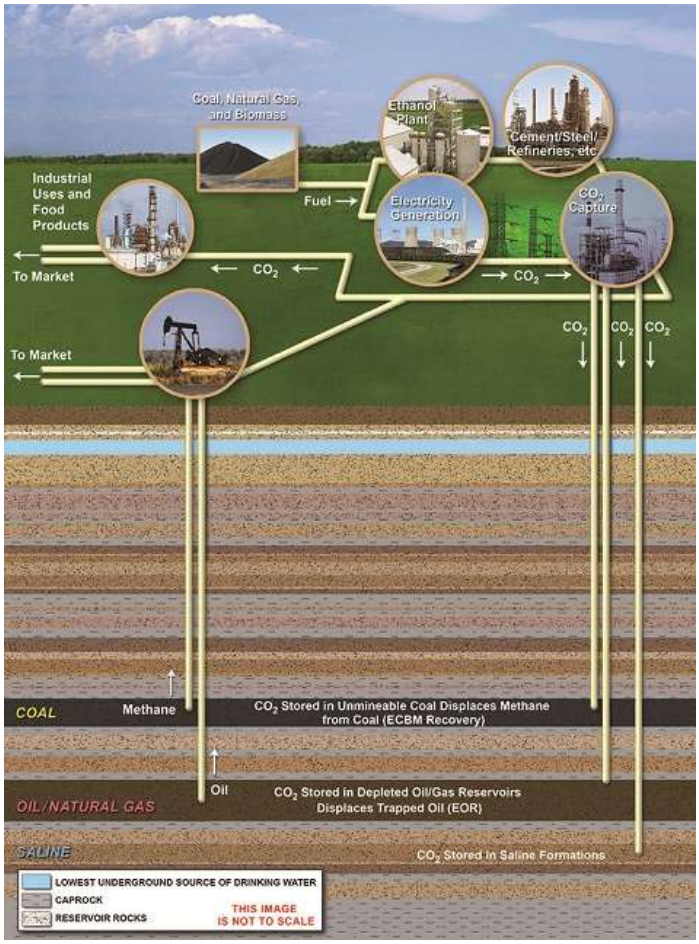
CCS enables industry to continue to operate while emitting fewer greenhouse gases (CHGs), making it a powerful tool for addressing mitigation of anthropogenic CO2 in the atmosphere. However, storage must be safe, environmentally sustainable, and cost-effective."



"Myth: Carbon capture and storage is not a feasible way to reduce human CO2 emissions.

Reality: Developing the technologies and know-how to successfully capture and store CO2 emissions will allow for a viable industry that will reduce the human contribution to atmospheric CO2 levels."

"Carbon dioxide (CO2) can be stored underground as a supercritical fluid. Supercritical CO2 means that the CO2 is at a temperature in excess of 31.1°C (88ºF) and a pressure in excess of 72.9 atm (about 1,057 psi). At such high temperatures and pressures, the CO2 … is dense like a liquid but has viscosity like a gas. The main advantage of storing CO2 in the supercritical condition is that the required storage volume is substantially less than if the CO2 were at 'standard' (room)-pressure conditions.



Temperature naturally increases with depth in the Earth's crust, as does the pressure of the fluids (brine, oil, or gas) in the formations. At depths below about 800 meters (about 2,600 feet), the natural temperature and fluid pressures are in excess of the critical point of CO2 for most places on Earth. This means that CO2 injected at this depth or deeper will remain in the supercritical condition given the temperatures and pressures present.

Myth: The CO2 gas behaves the same in the atmosphere as it does when injected deep underground.

Reality: The elevated temperatures and pressures that exist at the depths where CO2 is injected changes its characteristics, allowing for storage of much greater volumes of CO2 than at the surface."

https://netl.doe.gov/carbon-management/carbon-storage/faqs/carbon-storage-faqs

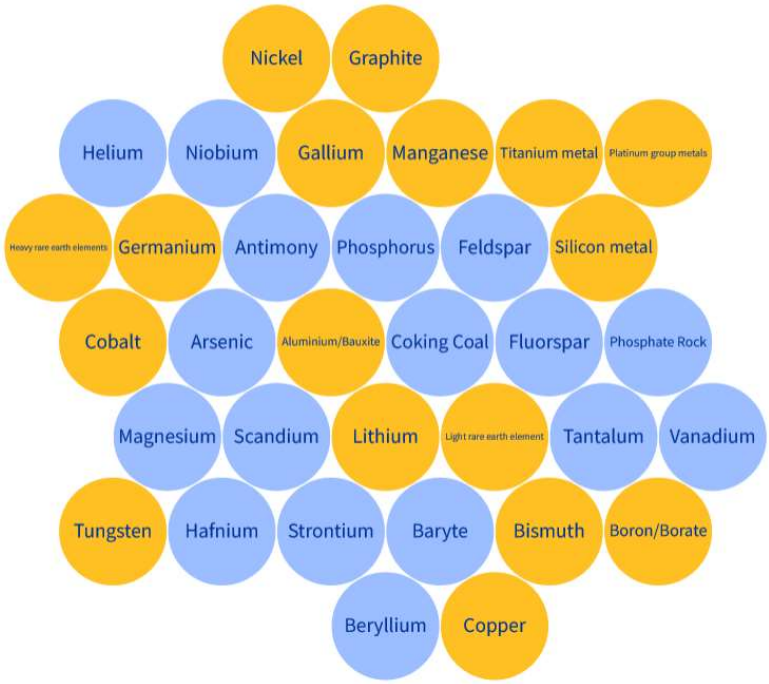
29. Reglament europeu sobre Matèries Primeres Crítiques, marzo 2024 (*Critical Raw Materials Act*)

"In March 2024, the Council adopted the European critical raw materials act, as demand for rare earths is expected to increase exponentially in the coming years. Critical raw materials (CRMs) are raw materials of high economic importance for the EU, with a high risk of supply disruption due to their concentration of sources and lack of good, affordable substitutes. The act aims to:

- increase and diversify the EU's critical raw materials supply
- strengthen circularity, including recycling
- support research and innovation on resource efficiency and the development of substitutes

The new rules will also strengthen Europe's strategic autonomy."

"Why the need for an EU critical raw materials act? The EU's demand for base metals, battery materials, rare earths and more are set to increase exponentially as the EU divests from fossil fuels and turns to clean energy systems which necessitate more minerals. The EU green transition will require the build-up of local production of batteries, solar panels, permanent magnets, and other clean tech. Abundant access to a range of raw materials will be needed to address the corresponding demand."



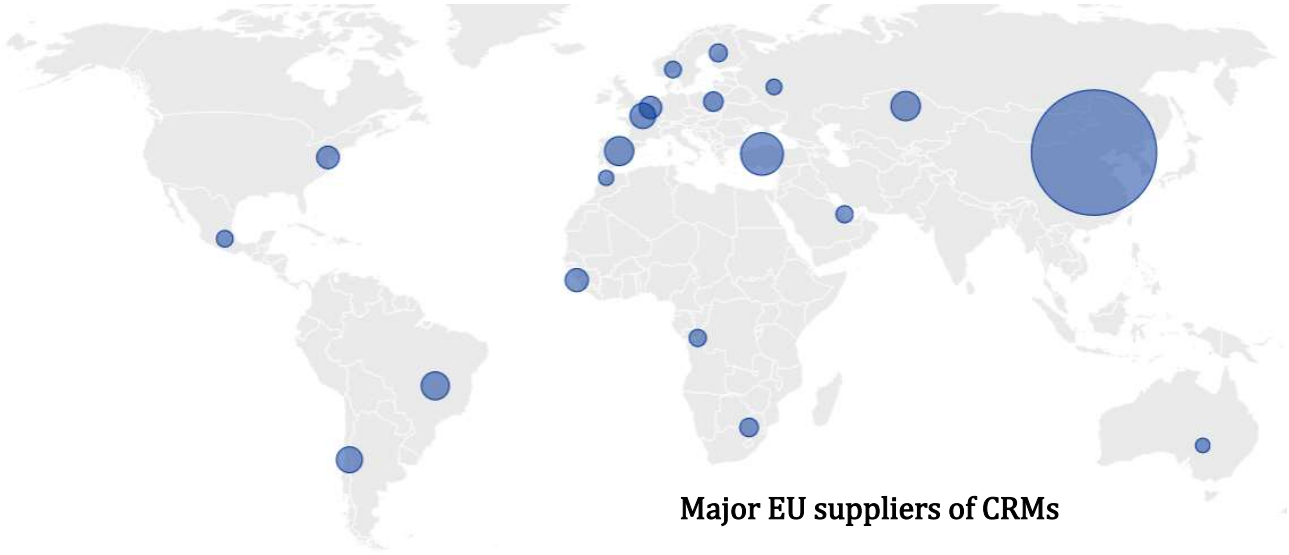
34 critical raw materials · 17 strategic raw materials in dark yellow

"Critical raw materials are used everywhere. Examples include:

vibrating technology in phones	tungsten
electric vehicles	lithium, cobalt and nickel
wind turbines	boron
semiconductors	silicon metal
building and flying aeroplanes	magnesium and scandium
manufacture of glass and production of fertilisers for plant growth	borates

The geopolitics of sourcing CRMs. CRMs are mostly sourced outside the EU. The EU will never be self-sufficient but aims to diversify its supply. Currently, for certain critical raw materials, the EU is solely dependent on one country:

- China provides 100% of the EU's supply of heavy rare earth elements
- Turkey provides 98% of the EU's supply of boron
- South Africa provides 71% of the EU's needs for platinum."



Major EU suppliers of CRMs

China
baryte: 45%, bismuth: 65%, gallium: 71%, germanium: 45%, magnesium: 97%,
natural graphite: 40%, scandium: 67%, tungsten: 32%, vanadium: 62%
(LREEs): cerium: 85%, lanthanum: 85%, neodymium: 85%, praseodymium: 85%, samarium: 85%
(HREEs): dysprosium: 100%, erbium: 100%, europium: 100%, gadolinium: 100%, holmium: 100%, lutetium: 100%, terbium: 100%, thulium: 100%, yttrium: 100%

"To reduce dependence on third countries to access critical raw materials, the EU set the following objectives for 2030.

- EU EXTRACTION: at least 10% of the EU's annual consumption from EU extraction
- EU PROCESSING: at least 40% of the EU's annual consumption from EU processing
- EU RECYCLING: at least 25% of the EU's annual consumption from domestic recycling
- EXTERNAL SOURCES: not more than 65% of the Union's annual consumption of each strategic raw material at any relevant stage of processing from a single third country."

https://www.consilium.europa.eu/en/infographics/critical-raw-materials/

30. Estratègia industrial europea

"Europe is embarking on a transition towards climate neutrality and digital leadership. The European industrial strategy aims to ensure that European industry can lead the way."

"On 10 March 2020, the Commission laid the foundations for an industrial strategy that would support the twin transition to a green and digital economy, make EU industry more competitive globally, and enhance Europe's open strategic autonomy. The day after the new industrial strategy was presented, the World Health Organization announced the COVID-19 as a pandemic.

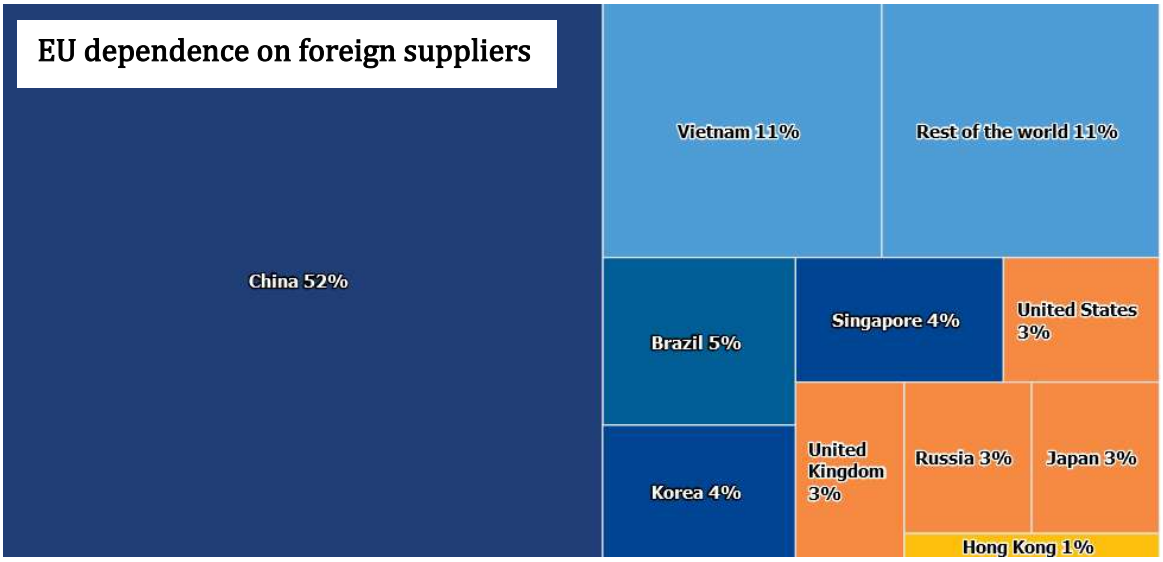
On 11 May 2021, the Commission updated the EU Industrial Strategy to ensure that its industrial ambition takes full account of the new circumstances following the COVID-19 crisis and helps to drive the transformation to a more sustainable, digital, resilient and globally competitive economy."

"As a primary vehicle of innovation in the various ecosystems, small and medium enterprises (SMEs) need to be kept in mind in all actions under this Strategy. This is reflected in a horizontal manner by increased attention to regulatory burdens for SMEs. New actions will strongly benefit SMEs and start-ups, whether it be from a strengthened Single Market, reduced supply dependencies or the accelerated

green and digital transitions. The Strategy also includes some measures dedicated to SMEs such as on increased resilience, combating late payments, and supporting solvency."

"The COVID-19 crisis has strongly affected the EU economy. Its impact varies across ecosystems and companies' size. The crisis exposed the interdependence of global value chains and demonstrated the critical role of a globally integrated and well-functioning Single Market (...) The updated Industrial Strategy ... focuses on:

- Resilience of the Single Market. The Single Market is the EU's most important asset, offering certainty, scale and a global springboard for European companies (...)
- Strengthening EU's open strategic autonomy. For the EU, a major importer and exporter, openness to trade and investment is a strength and source of growth and resilience (...)



- Accelerating twin transitions. The 2020 Industrial Strategy included a list of actions to support the green and digital transitions of EU industry."

https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy/depth-reviews-strategic-areas-europes-interests_en

31. Trilema de l'estratègia de creixement (*Growth strategy trilemma*, Ruchir Agarwal, 2023)

"Industrial policy is gaining momentum in many countries, with some economists pointing to China's model as a success ( ) There is renewed debate about the role of industrial policy and government support for firms and industries deemed strategically important. People are questioning whether we can trust the free market, and there are concerns that countries are losing their innovation edge. National security hawks also worry about relying on adversaries for critical resources such as semiconductors and pharmaceuticals."

"More than 90 percent of advanced chips, crucial for defense and artificial intelligence (AI), come from Taiwan Province of China—which raises concerns about US industry vulnerability in case of an attack. To address such risks, the US government is allocating $39 billion in funding from the $280 billion CHIPS Act to support the development of advanced semiconductor manufacturing capability (...) These

policies are part of the administration's broader approach to industrial policy, which also includes $370 billion in subsidies for clean energy in the Inflation Reduction Act. Meanwhile, Japan is providing subsidies worth more than $500 million to 57 companies to encourage them to invest domestically—as part of its efforts to reduce reliance on China. Similarly, the European Union is scaling up its industrial policy—including by setting aside €160 billion of its COVID-19 recovery fund for digital innovations such as chips, batteries, and climate adaptation. In the US, industrial policy is no longer a taboo subject."

"'Industrial policy' refers to government efforts to shape the economy by targeting specific industries, firms, or economic activities. This is achieved through a range of tools such as subsidies, tax incentives, infrastructure development, protective regulations, and research and development support. When implementing industrial policy as part of their growth strategy, countries are often faced with competing objectives, such as securing sustainable economic growth, maintaining financial and fiscal stability, and establishing 'national champions.'"

"Several considerations underpin this objective … : (i) enhancing national security by promoting self-sufficiency in key industries, (ii) supporting job-rich and inclusive growth, (iii) revitalizing left-behind communities, and (iv) the voter optics associated with reviving the manufacturing sector. Various countries have promoted specific firms or industries as national champions—such as semiconductors in Taiwan Province of China, renewable energy in Germany, and aerospace in France. This approach aims to create globally competitive companies, ensuring economic growth and security."

"Although the use of industrial policy to establish national champions has been successful in some cases, it remains controversial. Economists worry that picking winners and losers can lead to market distortions and inefficient allocation of resources (…) In a world of increasing economic nationalism and geopolitical tensions, establishing national champions is likely to remain an important policy objective for governments seeking to advance their national interests (…) The Growth Strategy Trilemma framework … can guide policymakers in striking a balance among economic growth, stability, and national champion objectives."

Promoting national champions

The Growth Strategy Trilemma has three competing objectives: fiscal/financial stability; economic growth; and the promotion of national champions.

"Pursuing any two of these objectives comes at the cost of partially sacrificing the third, making it a trilemma."

"Governments that support safe champions (Strategy A) prioritize financial and fiscal stability along with support for safe national champions. This strategy often emphasizes national security, prudence, and resilience over the potential benefits of a more aggressive growth strategy.

The strategy of supporting bold champions (Strategy B) emphasizes economic growth and the selection of risk-taking national champions. However, this approach may result in less attention to stability concerns. This could result from greater risk-taking activity or less focus on efficiency and governance—leading to potential costs to the financial system and resulting in fiscal costs."

"Finally, the fair-market capitalism approach (Strategy C) prioritizes stability along with economic growth—without a focus on national champions. Instead, the emphasis is on supporting a dynamic market economy along with free entry and ensuring that businesses operate in a fair and competitive marketplace.

Fair-market capitalism also offers a different path to achieving national security goals than the industrial policy approach. Instead of each country promoting national champions, the approach encourages a diversified global supply chain based on open and fair trade, thus avoiding an economic arms race. This approach can lead to greater efficiency and innovation in the long run while mitigating risks of supply-chain disruptions through diversification and international cooperation."

"A significant pressure you face as a country leader is the need to deliver economic growth. Achieving adequate growth can be essential for maintaining your political power, providing jobs, and ensuring the stability of your society. Without sustained growth, you may face mounting unemployment and social discontent, endangering your political tenure."

"In this context, industrial policy is a key tool at your disposal. This can involve awarding contracts, providing subsidies or tax breaks, or investing in infrastructure projects to establish national champions. However, promoting national champions can also have negative consequences. It can result in a concentration of economic power, misallocation of resources, and neglect of long-term considerations. It can also undermine market competition and innovation, ultimately harming growth and social welfare."

"Despite these costs and inefficiencies, you may be compelled to promote bold champions (Strategy B). This is because you could be under intense pressure to deliver quick wins, maintain political power, or provide jobs for your citizens. Moreover, industrial policy can give a sense of control over economic outcomes, reducing growth anxiety and providing a sense of security to both the government and the public."

"The Airbus case is often hailed as a model of successful government intervention in the economy. The creation of the Airbus consortium in Europe in the late 1960s—which challenged the dominance of Boeing in world markets—was made possible through government subsidies, commitments to absorb losses, and financing for fixed development costs. As a result, Airbus became a formidable competitor.

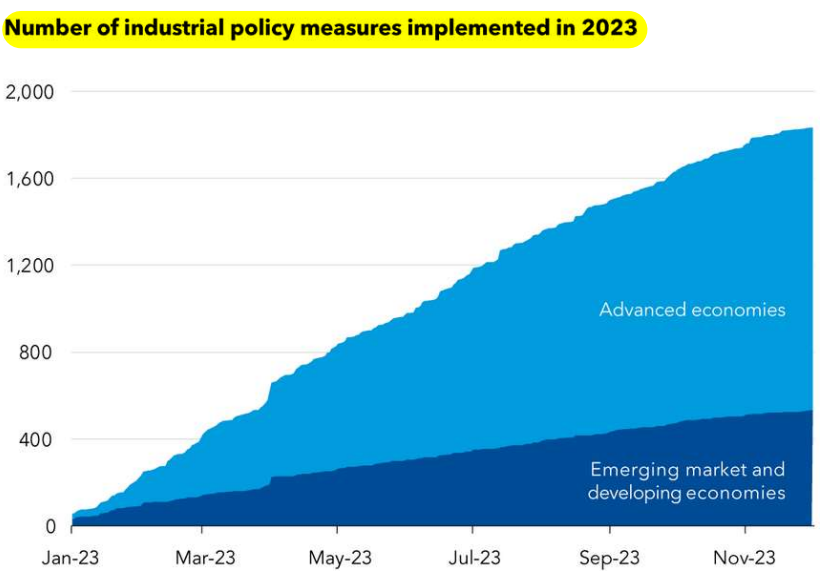
However, the recent Chinese experience with the COMAC C919 aircraft shows that industrial policy is far from a silver bullet. Driven by the conviction that a great nation should have its own airliners, China has invested heavily in developing its commercial aircraft to challenge the dominance of Boeing and Airbus (…) The C919 also hasn't been certified yet by any major aviation authority outside China, partly due to safety issues. Thus, despite industrial policy success with its domestic high-speed rail network during the 2010s, China has not been able to replicate this achievement in the competitive global

aviation industry. The lesson here is that promoting national champions can sometimes be effective, but it's not a guaranteed recipe for success."

https://www.imf.org/en/Publications/fandd/issues/Series/Analytical-Series/industrial-policy-and-the-growth-strategy-trilemma-ruchir-agarwal

32. Política industrial: entre l'encert i l'error

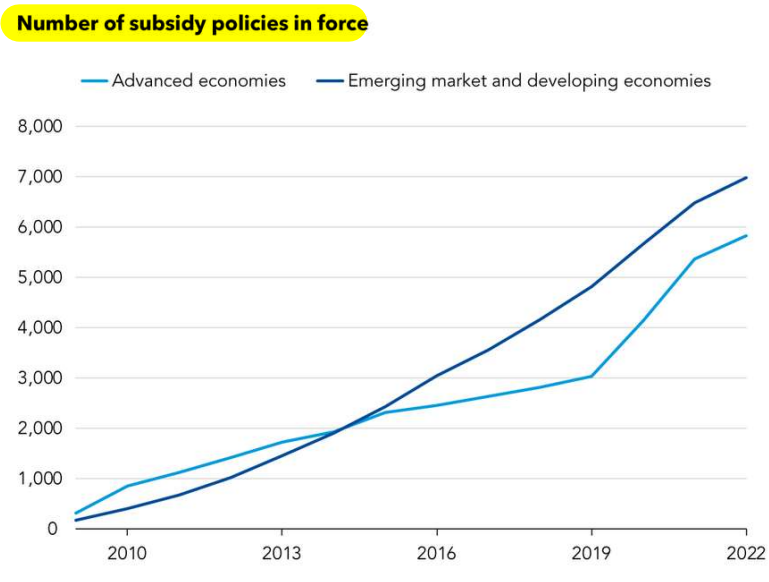
"Governments have traditionally used targeted interventions known as industrial policy to make domestic producers more competitive or promote growth in selected industries. While some developing countries continued to use it, industrial policy fell out of favor across most of the world for years, because of its complexity and uncertain benefits.



Now, industrial policy appears to be back everywhere. The pandemic, heightened geopolitical tensions, and the climate crisis raised concerns about the resilience of supply chains, economic and national security, and more generally about the ability of markets to allocate resources efficiently and address these concerns. As a result, governments came under pressure to have a more active industrial policy stance."

"… industrial policy is costly, and can lead to various forms of government failures ranging from corruption to mis-allocation of resources. Industrial policies can also lead to damaging cross-border spillovers, raising the risk of retaliation by other countries, which can ultimately weaken the multilateral trading system and worsen geoeconomic fragmentation. More data, more analysis and more dialogue are needed to avoid costly mistakes."

"The IMF recently joined forces with the Global Trade Alert to monitor developments. Our new research shows that there were more than 2,500 industrial policy interventions worldwide last year. Of these, more than two thirds were trade-distorting as they likely discriminated against foreign commercial interests. This data collection effort is the first step toward understanding the new wave of industrial policies."



"The recent surge in such measures has been driven by large economies, with China, the

European Union, and the United States accounting for almost half of all new measures in 2023. Advanced economies appear to have been more active than emerging markets and developing economies."

"… the use of subsidies has historically been more prevalent in emerging economies (…) Recent measures focus more on the green transition and economic security, and less on competitiveness. Competitiveness was the objective for one-third of all industrial policy measures last year. The remaining two-thirds were motivated by climate mitigation, supply chain resilience, and security considerations."

33. Mèrits de la nova política industrial

"The rise of 'Bidenomics' and its signature economic legislations, such as the Infrastructure Investment and Jobs Act (IIJA), Creating Helpful Incentives to Produce Semiconductors Act (CHIPS), and Inflation Reduction Act (IRA), has thrust industrial policy to the fore of economic policy discussions. With similar packages emerging across the OECD and beyond, there is renewed interest in understanding the workings of industrial policy."

"We define industrial policies as those government policies that explicitly target the transformation of the structure of economic activity in pursuit of some public goal. Importantly, these policies are selective; they target some activities, but not others. Moreover, they are intentional in the sense that changing the structure of the economy is what they want to do (…) The goals of industrial policy may be broad. While historically, these policies were primarily aimed at facilitating structural transformation and industrialization in particular, today, goals include climate goals, the creation of 'good jobs', supply chain resiliency, national security, and more."

"The economic rationale for industrial policy falls into three main categories: (1) market failures such as positive externalities which imply that the market will not provide enough of a positive activity (for example, modern manufacturing, green energy, good jobs); (2) coordination failures whereby a desirable activity may only be individually profitable if everyone else is also producing; and (3) the provision of activity-specific public inputs which are public goods (for example, the charging infrastructure needed for the uptake of electric vehicles)."

"Skeptics worry that the cure will be worse than the disease. There are two broad concerns: (1) information problems which prevent even a well-intentioned government from picking the correct activities to target; and (2) political capture, which implies that even if the government knows which activities to target, self-interested actors will divert the government away from those that create benefits to society at large. Both reasons create doubt about whether governments can 'pick winners'.

We acknowledge these challenges, yet argue that the ultimate test of the effectiveness is not whether governments can 'pick winners' but whether they are able to 'let losers go'."

"While economists turned away from the study of industrial policy, the world kept using them. In fact, industrial policies are ubiquitous – and growing … economists should study them in order to inform the question of how to do industrial policy better. The New Economics of Industrial Policy is doing just that."

"… three types of industrial policy: infant industry, public R&D, and place-based industrial policy."

"The Asian miracle constitutes not only one of the most important episodes of modern economic development, but it remains the focal point of debates surrounding the efficacy and desirability of industrial policy."

Juhász, Réka; Nathaniel Lane; Dani Rodrik (2023): "The new economics of industrial policy"
https://cepr.org/voxeu/columns/new-economics-industrial-policy

34. Inconveniència de la política industrial

"Should developing economies follow the United States and China by building national champions? Geopolitics is rapidly changing the landscape of world trade… During the reform period of the 1990s and 2000s, developing and transition economies opened up their markets and embraced globalization. That period saw the creation of the World Trade Organization, establishing a rules-based system of nondiscriminatory trade. It was also marked by an absence of geopolitical tensions as China focused on growth and Russia struggled with stabilization.

Now policymakers debate the future of globalization. They worry about the fragmentation of the world economy and the flouting of global trade rules. Trade interventions are on the rise, in the form of industrial policies and subsidies, import restrictions based on national security and environmental concerns, and export controls to punish geopolitical rivals and ensure domestic supply."

"The debate about whether developing economies should step into or back from the world economy is perennial. In the 1950s, many observers were pessimistic about the export prospects of low-income countries and feared they faced ever declining terms of trade. Global economic forces were seen as exacerbating inequality and pushing developing economies further behind. Import-substitution policies were needed, it was thought, to make their economies more self-reliant and less dependent on other markets."

"The belief that richer countries were successful because they protected manufacturing gave respectability to industrial policy. That turned out to be a misreading of history. Despite high tariffs, the United States developed as an open economy—open to immigration, capital, and technology—and one with an exceptionally large domestic market that was fiercely competitive."

"While across-the-board import substitution fell out of favor decades ago, the debate over industrial policy continues to this day. The experience of successful East Asian countries has given it a positive gloss … In 1960, South Korea was saddled with an overvalued currency and exports of just 1 percent of GDP … After devaluing its currency in the early and mid-1960s, Korea's exports became more competitive and exploded, reaching 20 percent of GDP by the early 1970s. The main policy involved setting a realistic exchange rate that allowed exports to flourish along with cheaper credit for all exporters, not targeted industries … Industrial policy did not really start until the Heavy and Chemical Industry Drive of 1973–79, which was later terminated because of its excessive costs and inefficiency. But Korea's rapid growth had already been unleashed before the industrial policy era. The debate over industrial policy has long been locked in a stalemate. Some see it as essential to productivity growth and structural transformation, while others see it as abetting corruption and fostering inefficiency."

"What is new is that the United States has joined China in an explicit embrace of industrial policies (…) With the CHIPS Act and the Inflation Reduction Act, the US introduced subsidies to 'reshore' production of semiconductors and adopted restrictive national content regulations for electric vehicles to ensure domestic production. And the European Union has always had industrial policies, announcing in 2020 an industrial strategy to enhance its 'open strategic autonomy' in the transition to a green and digital economy."

"Where does this leave developing economies? Should they follow the new Washington-Beijing-Brussels Consensus of building up certain national industries through government subsidies and trade restrictions? That would be a risky strategy. The subsidies could end up being expensive, and the benefits could prove elusive."

"Large-scale industrial subsidies seem to be a luxury that rich countries can indulge. Just because the US, China, and the EU can afford subsidies does not mean that others should follow."

"China illustrates how industrial subsidies can be an inefficient way of spending scarce resources. In 2006, China identified shipbuilding as a 'strategic industry' and began massive production and investment subsidies, mainly through cheap loans. Evidence suggests that these policies did not produce large benefits but were wasteful (due to excess capacity) and distorted markets (forcing more efficient countries to adjust by reducing their output)."

"China did not get rich through industrial policy but by improving productivity in agriculture, allowing foreign investment in manufacturing, and unleashing the private sector. India's 1991 reforms to dismantle the "License Raj" of red tape that stifled private enterprise and open the economy continues to propel growth, although more reforms are needed."

"Developing economies would be ill-advised to turn their backs on the global economy and give up the idea of supporting exports and acquiring technology from beyond their borders. They still have much to gain from the rest of the world."

https://www.imf.org/en/Publications/fandd/issues/2023/06/the-return-of-industrial-policy-douglas-irwin

35. És la globalització la millor política industrial?

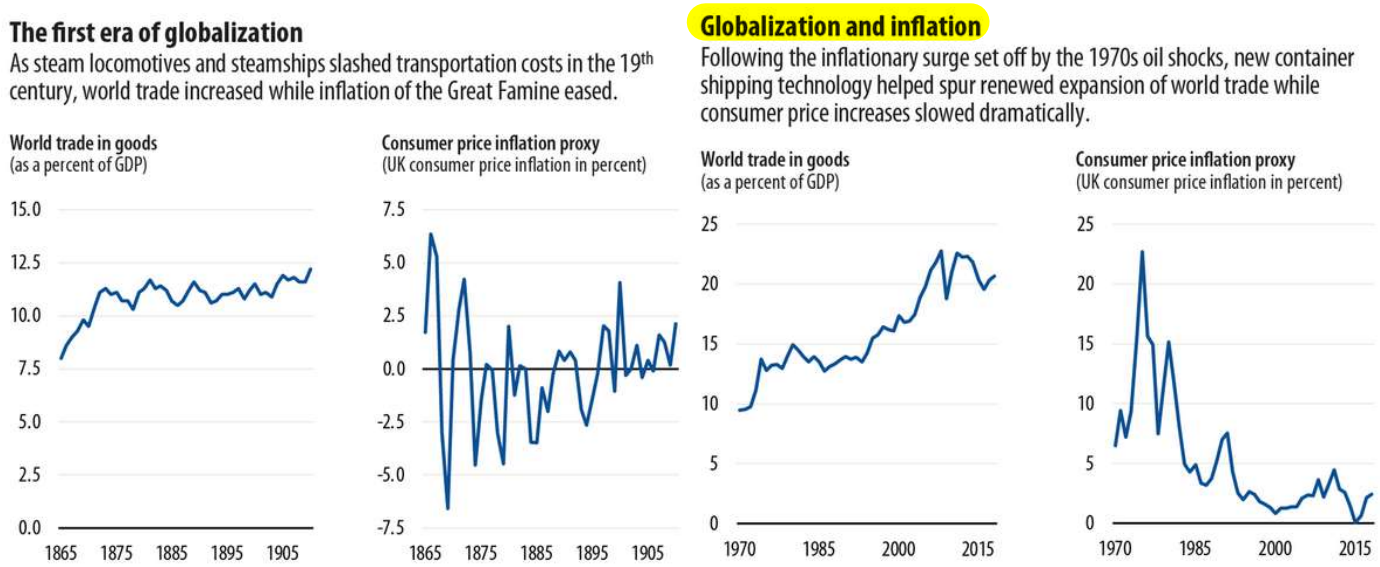
"History suggests the path to taming inflation is through more international trade—not less. Today's surge in inflation grows out of the interplay of supply chain disruptions with large fiscal deficits. The pandemic, followed by Russia's invasion of Ukraine, upended supply chains and produced scarcities. Rich industrial countries responded to the shortages, inequalities, and social stress with large fiscal packages. In the ensuing spiral, increased spending led to more demand, which led to more shortfalls. Another vicious spiral may follow. Rising food and fuel prices could spark discontent, protests, even revolutions and government breakdowns around the world.

The inflationary spiral may appear to herald a quite different world, split into competing blocs that pursue costly 'friendshoring' strategies of steering trade to friendly nations and regimes while attempting to hobble rivals. Large states rethink the benefits of globalization and attempt to protect

what they see as vital or strategic resources. This adds up to a recipe for freezing global economic growth."

"The hunger crises of the mid-19th century and the oil shocks of the 1970s at first ignited explosive rounds of worldwide inflation. In both cases, new technologies dramatically altered global supply systems, expanding globalization and leading to lengthy periods of disinflation. Thus, rampant inflation eventually drove the world to more rather than less globalization, with broad benefits."

"There is a historical pattern of globalization driving disinflation. What is usually thought of as the first age of modern globalization began in the middle of the 19th century with the hunger crises. It was interrupted by World War I, followed by the Great Depression. Eventually, a new style of globalization took off in the 1970s. Both turning points—in the 1840s and 1850s and in the 1970s—started with shortages and inflationary surges (…) In both cases, technological breakthroughs in transportation then drove an innovative globalization. It was the steam engine that opened up continents with railroads and oceans with steamships. Following the 1970s, the shipping container sharply reduced the cost of transporting goods."



"It took a dramatic shock in each case to turn intriguing ideas into transformational technologies: the hunger crises of the mid-19th century and then the oil price surges in the 1970s. It was disruption caused by big price increases that created the circumstances to realize the transformative power of the innovations. The big payoff came only through conditions of shortage. The widespread adoption of innovation depended on policy choices, starting with the removal of impediments to commerce."

"In the midst of the previous transitions, few people felt comfortable. There was instability. In the mid-19th century, governments were overthrown around the world, and it was not immediately obvious that the successors were better, more competent, or more effective. They needed to learn. In the 1970s, there was widespread, corrosive doubt about the viability of democracy (…) In the mid-19th century and also in the 1970s, it soon became clear that governments that did not open to the world performed worse."

"… we can see the new technologies that will produce better growth and a superior capacity to tackle the wide range of contemporary issues—health, energy policy, climate, and even security. They all require cross-border action and coordination. The equivalents to the steam engine or the container ship

are scientific breakthroughs that already exist. The messenger RNA vaccine, for example, had been under slow development since the 1990s, mostly as an answer to rare tropical diseases (…) Similarly, the technical possibilities of remote medicine or education were there well before the pandemic. Under pressure of necessity, their application quickly became commonplace and set off a revolution that might make for broader and cheaper access. Remote working—also across political frontiers—is the equivalent of communications revolutions of the past."

"An initial globalization centered around the Industrial Revolution saw the exchange of manufactured goods from a few countries for commodities from many in the rest of the world. The 1970s created globalization through increasingly complex supply chains. The current crises are generating a different sort of globalization, shaped by information flows. There will be marked contrasts in the competence with which societies respond to the new data revolution. Today's globalization dynamic has the potential to create a revolution of system optimization, making the result of prior technical change cheaper and more accessible."

https://www.imf.org/en/Publications/fandd/issues/2023/03/in-defense-of-globalization-harold-james

36. La política d'inflació

" 'An effective way to write the history of the last thirty years of the twentieth century,' economist Albert Hirschman wrote in 1985, 'may well be to focus on the distinctive reactions of various countries to the identical issue of worldwide inflation.'"

"… fear of the great inflation of the 1970s still dominates the thinking of the Federal Reserve".

"Economists lack a good understanding of what causes inflation. In introductory macroeconomics curricula, the mantra of Milton Friedman remains central: 'inflation is always a monetary phenomenon.' … But … increases of the monetary base have occurred without any inflationary episodes, and inflationary episodes have happened with only very small increases in the monetary base.

Contra Friedman, Hirschman suggested that uncontrolled inflation is primarily a political phenomenon that occurs when groups compete over resources. The rapid increase of the price level is a signal that the state can no longer control this competition."

"The term 'Minsky moment'—the point where a bubble caused by the accumulation of private debt bursts—was coined by PIMCO's Paul McCauley in the context of the 1998 Russian financial crisis… But Minsky's Financial Instability Hypothesis (FIH), the idea that capitalism has a tendency toward financial crisis, was part of a more elaborate theory of advanced capitalist economies. Minsky believed that as a financial system, capitalism was best defined by the fact that all economic units, including individuals and households, must survive by making cash inflows and matching commitments. This is what he called a ¡survival constraint¡: everyone from industrial firms to individual workers must have cash on hand to pay their debts or else find credit to roll their liabilities over to some future date when they will have cash flows."

"Minsky analyzed what he called 'big government' capitalism … He argued that postwar governments which boosted inflation through private profits contradicted Keynes' original system. Keynes believed

that the state should facilitate long term economic development by directly planning economic activity, including the distribution of investment over the long run. Postwar American policymakers, however, created a policy that protected private sector profits during downturns (…) Government was forcing 'overinvestment' in capital intensive industries like auto manufacturing and aerospace. While this created good jobs, it also meant that workers would have more money to spend on things made by less capital intensive, nondurable consumer goods industries. Wage inequality between these two sectors caused increasing industrial conflict. In the United States and Western Europe … managers made wage concessions to the most highly productive workers to keep at bay demands for greater union participation in company decisions, thereby further increasing the demand for consumer goods.

Because returns to capital intensive goods were high, the investment capital needed to expand capacity in consumer goods was scarce. With rapidly increasing demand, the price of these goods began to rise, leading to a wage-price spiral. In industries with no anticipated profits, capitalists had no incentive to expand capacity. Consequently, output remained stable while prices rose. In the labor market, some workers held on to their jobs while others were relegated to chronic underemployment."

"In Minsky's world, it is not the supply of money that drives the inflationary process but rather developments in the real economy. It is the demand for money that causes the expansion of the availability of the means of payment through the issuance of privately-issued bank credit that can be used to purchase goods. Thus, the supply of money is endogenous to the economic system (…) It's not the ability of central banks to print money, but their ability to contract and expand the issuance of credit money, that fuels economic expansions."

"While the hydraulic Keynesians sought to restore long-term equilibrium through short-run interventions aimed at preserving private profits, Keynes held that there was no equilibrium course set by supply and demand. Instead, the key relationship was between the profit expectations of investors and the workers' final consumption of produced goods. Propping up private profits would do nothing to help rectify these imbalances and instead only create financial instability, driving markups by capitalists realizing their investments. Stable when supported by a highly regulated banking system, 'big government capitalism' was therefore vulnerable to bottlenecks caused by the maldistribution of demand across social groups."

"The 1970s infamously became an era of 'stagflation'—high inflation and slow growth—across the industrialized world. To deal with stagflation, governments transitioned to a system which Minsky labeled 'money manager capitalism.' This new system was marked by a rapid deregulation of finance and the creation of an economy in which managers of large concentrations of privately-created credit money met credit commitments through quick returns on investment. As a system, it was less stable and more anemic than its big government predecessor, but also less prone to inflation. Importantly, the latter shifted from wages and consumer good prices to financial assets. Credit expansion enabled the purchase and repurchase of financial assets, bidding up their prices irrespective of investment. In doing so, it allowed governments to halt inflation in consumer goods, at the cost of shifting investment away from the real economy and into the financial sector."

"It wasn't the reduction of the state's money supply, but the absolute destruction of the private economy that ended the great inflation … What Minsky did not predict was that this situation would persist for a

very long time. In the United States and around the world, deflationary political coalitions have proved to be very durable."

"… the processes which allowed for the formation of deflationary coalitions exhibited some common features: governments empowered rentiers, gave some citizens nominal gains as consumers, ensured access to certain classes of growth assets for powerful constituencies, and repurposed the institutions of 'big government capitalism' to support financial deregulation. Redistributing gains away from workers, financial deregulation integrated global economies in a manner that allowed states to pursue growth strategies benefiting an exclusive class of rentiers. This new class supported deflationary policies long after inflation posed an imminent threat."

"The creation of deflationary coalitions around the world supported the shift from wages to capital gains. However, outside these economies, the world did in fact see a second round of inflation, concentrated in post-Communist economies (…) Workers and managers avoided attempts at improving production due to a lack of rewards—a situation summed in the phrase, 'they pretend to pay us, we pretend to work.'

The liberalization and eventual collapse of Communist economies brought the problem of inflation into the open. To deal with these consequences, post-Communist regimes, including China, controlled the expansion of bank credit and the accumulation of foreign exchange through persistent trade surpluses. Mechanically, this was accomplished by lowering wages relative to productivity. Workers in these economies produced more than they could consume, creating a surplus that could be exported."

"The surpluses of exporting countries were sustained at the expense of the American tradeable goods sector and its high paying jobs, thereby continuing to suppress inflation. In turn, however, exporters needed to purchase assets with their dollar-denominated receipts. The American financial sector was more than happy to provide them, financing the consumer credit that made the cycle possible. The demand for dollar assets in the mid-2000s helped fuel the American housing boom that ended in 2008. This cycle of funding and asset distribution connects 'money manager capitalism' with 'asset capitalism' and is the reason for its durability despite its financial instability."

"Why have neoliberal ideas persisted despite their apparent failures? The question seems less perplexing when we conceive of neoliberalism as a set of economic practices performed by institutions designed to protect the interests of the deflationary coalition."

"In Europe, pro-austerity, right-wing coalitions have come into power to maintain the infamous 'schwarze null'—the budget surplus so central to conservative politics in Germany and other Northern European surplus economies. Meanwhile, in China, authoritarian retrenchment is rooted in fear of the financial instability posed by the debts of local governments and the need to maintain the consumer repression of households."

"… since 2008 … visions of an alternative to the deflationary consensus have come from a surprising actor: independent central banks (ICBs). A cornerstone of the deflationary policy shift of the 1980s, ICBs are now uniquely positioned to fight for the growing portion of the population that has lost out from the system of asset price inflation, low wages, low goods inflation, and easy financing which has dominated policymaking in recent decades."

"The European Central Bank and the Federal Reserve have begun to re-evaluate the legacy of prioritizing inflation targeting over full employment … The ability of central banks to jump the barrier between the financial and real economies means that their power over the creation and limitation of credit can be used to 'socialize finance'—as Minsky advocated for in his recovery of Keynes from the hydraulic Keynesians. Socializing the flow of investment in order to ensure broad prosperity will require institutionalization, perhaps separating the traditional function of central banks from a new kind of national or supranational investment authority designed to rationally distribute credit in ways that would neither be inflationary nor deflationary."

"The control of the inflation-deflation cycle cannot be reduced to apolitical interventions in the supply of money. Rather, breaking this vicious cycle at the heart of capitalism will require us to understand how to best spend that money in a way on the appropriate capacities and goods for each phase of an evolving economic system. Establishing such an 'investment rule' should be at the task of a post-deflationary economics. An activist central bank … might be the path to achieving Hyman Minsky's dream of stopping the boom and bust of inflation and deflation, through the socialization of finance."

Feygin, Yakov (2021): "The Deflationary Bloc. Hyman Minsky and the politics of inflation"
https://www.phenomenalworld.org/analysis/deflation-inflation/

37. Opinions sobre societat, economia i governança de Lee Kuan Yew

- "Human beings, regrettable though it may be, are inherently vicious and have to be restrained from their viciousness."
- "We may have conquered space, but we have not learned to conquer our own primeval instincts and emotions that were necessary for our survival in the Stone Age, not in the space age."
- "I have always thought that humanity was animal-like, while Confucian theory says that it can be improved. I am not sure it can be, but it can be trained, it can be disciplined."
- "In any given society, of the 1,000 babies born, there are so many percent near-geniuses, so many percent average, so many percent morons…It is the near-geniuses and the above- average who ultimately decide the shape of things to come."
- "Good sense and good economics require that we must always find practical, not doctrinaire, solutions to our problems of growth and development."
- "I do not believe that because a theory sounds good, looks logical on paper, or is presented logically, therefore that is the way it will work out. The final test is life. What happens in real life, what happens with people working in a society."
- "Do not try to impress by big words. Impress by the clarity of your ideas…I speak as a practitioner. If I had not been able to reduce complex ideas into simple words and project them vividly for mass understanding, I would not be here today."
- "There are three basic essentials for [the] successful transformation of any society. First, a determined leadership…two, an administration which is efficient; and three, social discipline."

- "One of the reasons why a privileged society based on the privilege of property and rank must give way to a society where people are rewarded according to their ability and their contribution to society is that it is only when people are encouraged to give their best that society progresses. No society has existed in history where all people were equal and obtained equal rewards. If that were to be practiced, and the lazy and the incompetent were paid as much as the industrious and the intelligent, it would end up by all the good people giving as little of themselves so as not to give more than their weaker brethren. But it is possible to create a society in which everybody is given not equal rewards, but equal opportunities, and where rewards vary not in accordance with the ownership of property, but with the worth of a person's contribution to that society. In other words, society should make it worth people's while to give their best to the country. This is the way to progress."
- "Why did China's technological advance slow down and halt, just when the Renaissance was beginning in Europe? China's stagnation was caused by its arrogance and complacency. It refused to learn from the West. When the British emissary Lord Macartney arrived in Beijing in 1793, bringing with him the marvels of the industrial revolution, the Emperor Qian Long was not impressed. The great emperor told the English nobleman, 'There is nothing we lack nor do we need any of your country's manufactures.' The price China paid for this arrogance was 200 years of decline and decay, while Europe and America forged ahead. Two hundred years later, another Chinese leader, more thoughtful and practical, set out to undo the damage. Deng Xiaoping opened up China to the world in 1978."
- "These are the four salient features of America's entrepreneurial culture: (1) a national emphasis on personal independence and self-reliance, (2) respect for those starting new businesses, (3) acceptance of failure in entrepreneurial and innovation efforts, and (4) tolerance for a high degree of income disparity."
- "From my empirical observation of people and leaders, I believe 70–80% of a person's capability, proclivities, temperament is genetic... If you are bound to be a capable person, you will grow into a capable person. If you are bound to be slow, you will be slow. Nothing can change that…I do not believe, contrary to what American books say, that you can teach people to be leaders. I think you are a born leader or you are not a leader. You can teach a person to be a manager, but not a leader. They must have the extra drive, intellectual verve, an extra tenacity, and the will to overcome."
- "I have spent 40 years trying to select people for big jobs…I have gone through many systems, spoken to many CEOs…I decided that Shell had the best system of them all, and the government switched from 40 attributes to three, which they called 'helicopter qualities'…What are they? Powers of analysis; logical grasp of the facts; concentration on the basic points, extracting the principles. You score high marks in mathematics, you have got it. But that is not enough…They must have a sense of reality of what is possible. But if you are just realistic, you become pedestrian, plebeian, you will fail. Therefore, you must be able to soar above the reality and say, 'This is also possible'—a sense of imagination."
- "The problem is that the human being is unable yet to assess this thing called 'character.'… It is amazing how many highly intelligent persons in the world make no contribution at all to the

well-being of their fellow people. And it is this as yet unascertainable or, rather, as yet unmeasurable, quality called 'character,' which, plus your mental capacity or knowledge or discipline, makes for leadership… In the established societies … all their leadership comes from a broad stratum of people who have gone to universities. It is so much better if … a person also goes through a systematic course of discipline, learns all the basic norms, what history has to offer and human experience has to offer, and then takes over that leadership."

- "*What are the most common public policy mistakes that leaders make?* Sometimes they succumb to hubris and overconfidence, and other times they miss a transformative opportunity when it arrives."
- "China has more handicaps going forward and more obstacles to overcome than most observers recognize. Chief among these are their problems of governance: the absence of the rule of law, which in today's China is closer to the rule of the emperor; a huge country in which little emperors across a vast expanse exercise great local influence; cultural habits that limit imagination and creativity, rewarding conformity; a language that shapes thinking through epigrams and 4,000 years of texts that suggest everything worth saying has already been said, and said better by earlier writers; a language that is exceedingly difficult for foreigners to learn sufficiently to embrace China and be embraced by its society; and severe constraints on its ability to attract and assimilate talent from other societies in the world."
- "China is not going to become a liberal democracy; if it did, it would collapse."
- "I understood Deng Xiaoping when he said: if 200,000 students have to be shot, shoot them, because the alternative is China in chaos for another 100 years."
- "Historically, the U.S. has demonstrated a great capacity for renewal and revival. America's strengths include no grooved thinking, but rather, an ability to range widely, imaginatively, and pragmatically; a diversity of centers of excellence that compete in inventing and embracing new ideas and new technologies; a society that attracts talent from around the world and assimilates them comfortably as Americans; and a language that is the equivalent of an open system that is clearly the lingua franca of the leaders in science, technology, invention, business, education, diplomacy, and those who rise to the top of their own societies around the world."
- "India has wasted decades in state planning and controls that have bogged it down in bureaucracy and corruption. A decentralized system would have allowed more centers like Bangalore and Bombay to grow and prosper…The caste system has been the enemy of meritocracy…India is a nation of unfulfilled greatness. Its potential has lain fallow, underused … There are limitations in the Indian constitutional system and the Indian political system that prevent it from going at high speed … Whatever the political leadership may want to do, it must go through a very complex system at the center, and then even a more complex system in the various states."
- "Oil without Islamism can be a problem, but Islamism *plus* oil becomes a volatile mix. Islamism *plus* oil *plus* weapons of mass destruction equals a threat…A nuclear-capable Iran will significantly alter the geopolitical balance."

- "There are no historical precedents on how to maintain peace and stability and to ensure cooperation in a world of 160 nationstates. And the age of instant communications and swift transportation, with technology growing exponentially, makes this problem very complex."
- "There is no viable alternative to global integration. Protectionism disguised as regionalism will sooner or later lead to conflicts and wars between the regional blocs as they compete for advantage in non-bloc areas, like the oil countries of the Gulf. Globalism is the only answer that is fair, acceptable, and will uphold world peace."
- "Westerners have abandoned an ethical basis for society, believing that all problems are solvable by a good government … In the West, especially after World War II, the government came to be seen as so successful that it could fulfill all the obligations that in less modern societies are fulfilled by the family … In the East, we start with self-reliance. In the West today, it is the opposite. The government says give me a popular mandate and I will solve all society's problems."

llison, Graham; Robert D. Blackwill; Ali Wyne (2013): *Lee Kuan Yew. The Grand Master's Insights on China, the United States, and the World* (interviews and selections by), MIT Press.

38. Tradició i present de política industrial als EUA

"To its supporters, a new U.S. industrial policy is essential to respond to China's state-led development, secure a supply of critical materials and products, and develop technologies that could preserve the planet. They point to the use of industrial policy not only in China, but also in countries such as Germany, Japan, and South Korea, as well as its historical use in the United States. To critics, such a policy inevitably distorts the free market and rewards companies not for the quality of their products and services but for their skill at lobbying lawmakers."

"Industrial policy generally refers to efforts to promote specific industries that the government has identified as critical for national security or economic competitiveness. In a Council Special Report, CFR experts Jennifer Hillman and Inu Manak define industrial policy as 'government action that encourages or directly subsidizes the expansion of certain economic sectors over others.' Industries often included are those with heavy manufacturing or that have military applications, such as aerospace, semiconductors, and electric vehicles. Policy measures could be protective tariffs or other trade restrictions, direct subsidies or tax credits, public spending on research and development (R&D), or government procurement (goods and services, such as military equipment, that the government buys)."

"Alexander Hamilton is widely considered to be the first major proponent of industrial policy in the United States. In his famous 1791 'Report on the Subject of Manufactures,' the nation's first treasury secretary advocated supporting the fledgling U.S. manufacturing sector through a combination of tariffs and subsidies

This Hamiltonian tradition has been expressed in various forms throughout U.S history, such as Henry Clay's vision of an 'American System'—a combination of tariffs, a national bank, and infrastructure development—in the early nineteenth century, writes Ganesh Sitaraman of

Vanderbilt University. Sitaraman ascribes several other traditions of U.S. industrial policy to early American leaders, including a 'Franklinian' tradition focused on promoting research and infrastructure, rather than particular industries, and a 'Madisonian' tradition centered on creating a competitive market through the use of antitrust and other regulations.

However, among advanced economies, the United States has historically been 'the most averse to using industrial policies in any kind of consistent fashion,' says CFR's Alden. Washington has typically embraced it only in response to a perceived external threat, he says."

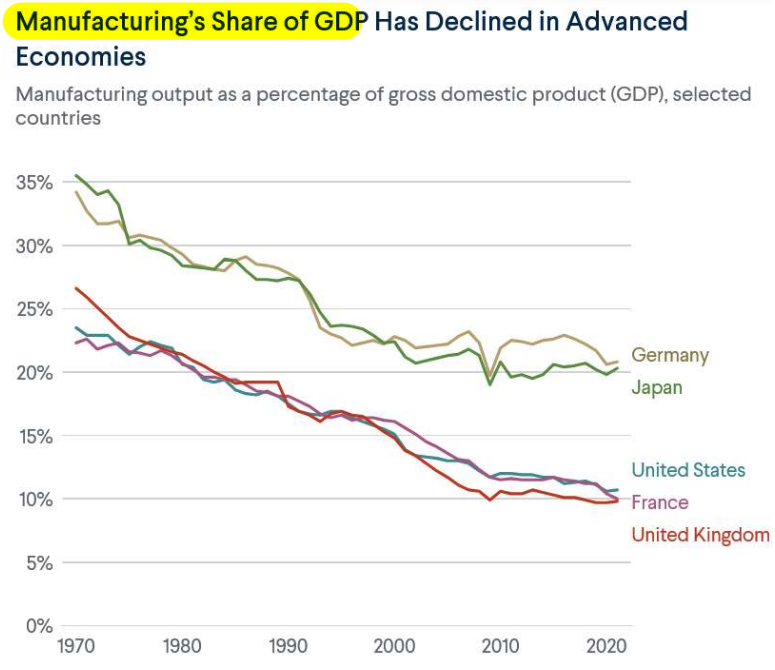
"Experts cite many of President Franklin D. Roosevelt's (FDR) New Deal programs of the 1930s as early examples. These include the National Recovery Administration, which sought to regulate wages and prices across a slew of industries. The massive, government-directed World War II mobilization that followed was also an extreme case.

After the war, U.S. industrial policy was largely driven by competition with the Soviet Union, including the space race. The Pentagon's Defense Advanced Research Projects Agency (DARPA)—conceived in response to the Soviet Union's launch of Sputnik, the first artificial satellite—has been credited with paving the way for the modern internet and the Global Positioning System (GPS), among other breakthroughs. Massive government purchases of semiconductors spurred the growth of the U.S. chips industry. But competition with Japan in the semiconductor sector in the 1980s stoked fears of a U.S. decline. This slump led to the creation of Sematech, a government-backed consortium of fourteen U.S. companies aimed at strengthening the industry by coordinating R&D spending and setting common standards."

"More recent examples include ARPA-Energy, founded in 2009 to develop new energy technologies as the Department of Energy's own version of DARPA. Through September 2022, the program had distributed more than $3 billion to almost 1,500 projects, according to the Department of Energy."

"Proponents argue that the government has both the ability and the duty to structure the economy in the national interest, since the free market may fail to do so (…) What's more, a country could determine that it needs to domestically produce critical goods, such as medical supplies or military equipment, for national security reasons. Supporters also argue that the government should fund R&D because the societal benefits go far beyond what companies will invest in.

A smart industrial policy should focus on high-value industries that compete internationally, have civilian and military applications, and are difficult to revive once lost (…) Some experts say that industrial policy can serve a valuable purpose, but warn against its potential pitfalls … 'industrial policy—done wrong—can stifle innovation, create substantial inefficiencies,



exacerbate the concentration of corporate power, waste precious taxpayer funds, and fuel crony capitalism.'"

"Industrial policy fell out of favor in the 1980s and 1990s with the development of the Washington Consensus (…) But there is renewed interest among policymakers on both sides of the aisle due primarily to the rise of China, increasing economic inequality, the threat of climate change, and supply-chain vulnerabilities revealed by the COVID-19 pandemic."

"President Biden campaigned on a pledge to 'Build Back Better,' proposing hundreds of billions of dollars in new spending to improve U.S. economic competitiveness and promising a foreign policy 'for the middle class.' One of his first actions in office was an executive order aimed at strengthening so-called Buy American laws, which require the federal government to purchase goods and services from U.S. companies. In another executive order, he began the process of replacing the federal government's massive fleet of vehicles with clean-energy models made in the United States."

"In 2022 … the CHIPS and Science Act, passed in August of that year, will direct some $280 billion toward scientific R&D and semiconductor production in the hopes of encouraging advanced technology manufacturing to move to the United States and away from China. In the weeks following the law's passage, half a dozen semiconductor manufacturers announced plans to use federal subsidies to bolster their U.S. manufacturing. To access funds from the legislation, companies must commit to not build certain types of facilities in China, Iran, North Korea, or Russia. The Biden administration also took unprecedented action to out-compete China on emerging technologies, introducing strict export controls that restrict China's ability to obtain advanced computing chips, maintain and develop supercomputers, and manufacture semiconductors (…) In August 2023, Biden followed up the controls with an executive order banning some U.S. investment in the Chinese technology industry.

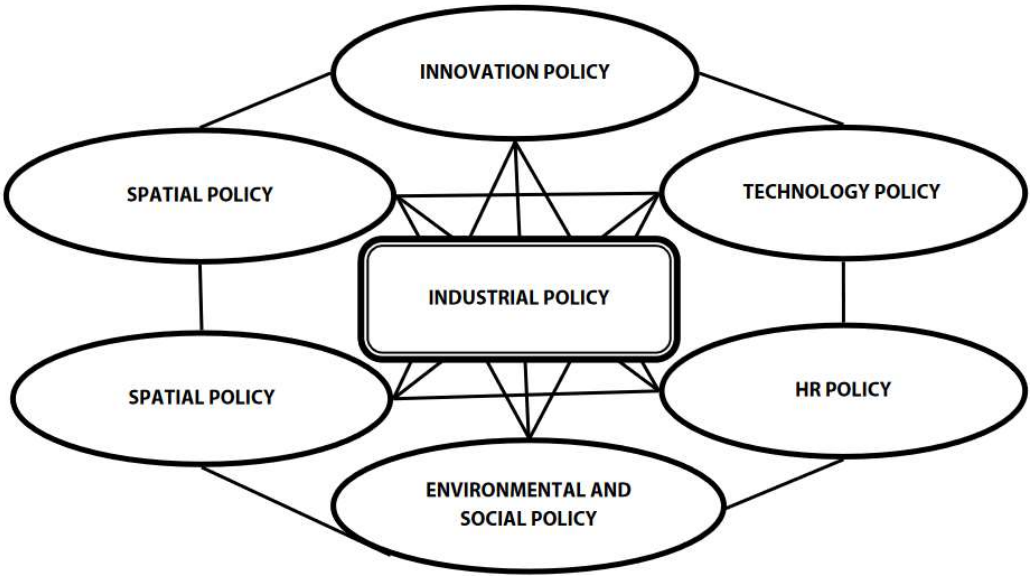
The Inflation Reduction Act, also passed in August 2022, contains an additional $60 billion in tax credits, grants, loans, and investments to bring advanced transportation and technology manufacturing back to the United States. The law includes billions of dollars in new subsidies for consumers and manufacturers of electric vehicles whose final assembly takes place in North America and whose batteries contain components and critical minerals primarily sourced from the United States or its trade allies. Beginning in 2024, automakers whose battery components are manufactured in China will not be eligible for the subsidies."

Siripurapu, Anshu; Noah Berman (2023): "Is Industrial Policy Making a Comeback?"
https://www.cfr.org/backgrounder/industrial-policy-making-comeback

39. Política industrial: visió tradicional i visió moderna ('bona economia')

"Socio-economic policy of any state is based on a variety of policies that define the development of various activities, including economic, social, investment, innovation, environmental, institutional, and other activities. The coordination of above policies in order to successfully implement social and economic policy can be the most effective when it is based on the formation and implementation of

industrial policy. But industrial policy is not only a coordinating component for various state policies, but also a platform that serves as a basis for building the economic policy of the state."



Coordinating role of industrial policy

"The systematization of multiple studies in this area allows to identify five main groups which can combine traditional, widely used concepts of industrial policy (...) In the first group of interpretations, the industrial policy is viewed as a tool for creating the conditions for economic growth and better competitiveness. The concepts of industrial policy, which can be combined into the second group, are related to defining the impact of the government on the operation of markets. The third group in the traditional understanding of industrial policy combines its supporters from the point of view of defining impact on the development of sectors with high value added. The fourth group brings together the experts focusing on the need to combine support for the development of new industries with the simultaneous modernization of traditional production facilities. The most common interpretation of industrial policy defines it as a policy associated with a target-oriented change in the structure of the economy. The supporters of this approach are combined in the fifth group."

Traditional approach	• Creating conditions for economic growth and higher competitiveness (V. M. Polterovich, V. V. Popov, 2006; J. Beath) [3, 4]; • Influence of the government (ruling elite) on the markets (G. Federico) [5]; • Supporting the development of sectors with high value added (Yu. Simachev, 2017) [6, p.12]; • Developing new and modernizing traditional industries (V. E. Dementyev, 2013) [7]; • Target-oriented change in the structure of the economy (B.V. Kuznetsov, Yu. V. Simachev, 2014, A. I. Tatarkin and O. A. Romanova, 2007, D. Rodrik, 2004, C. Warwick, 2013) [1, 2, 8, 9]
New understanding	• Realization of comparative advantages within the framework of "new structural economy" of J. Lin [10]; • Image of "good economy" (E. Phelps, 2009, B. Cutter, 2016) [11-13]; • "Good economy" as the foundation of industrial policy (V. L. Tambovtsev, 2017) [14].

Traditional and new approach to understanding the purpose of industrial policy

"… amid high uncertainty and geopolitical transformations, the understanding of industrial policy as an evolving system of relations between the state, business entities, and civil society institutions can become a common theoretical foundation for all groups of above interpretations. Such system of relations emerges in reference to the formation of structurally balanced, competitive economy (industrial policy in the broad sense) or structurally balanced, competitive industry (industrial policy in the narrow sense). At the same time, it is important to mention that industrial policy in the narrow sense may relate not only to industry, but also to any other sector of the economy."

"The first decades of the 21st century were marked by the appearance of works that offer a new understanding of industrial policy (…) In this case, the industrial policy is viewed as a tool for implementing the comparative advantages of economies in different countries (…) A positive outcome can be achieved only if the government priorities reflect structural changes based on specific assets of the economy that allows certain sectors to have advantages in global markets (…) Materializing the identified advantages also requires the participation of the state, which is implemented through the state industrial policy.

We also see the development of another approach to understanding industrial policy based on the notion of a 'good economy' (…) Some authors view the so-called 'new entrepreneurial economy' as a good economy. For example, in the works of B. Cutter, the high quality of such good economy is ensured by at least 2 % annual productivity growth with an overall economic growth of 3 %, stable increase of labor, high level of new business creation, unemployment at the level of 5–6 %, and self-employment at about 30 %".

"There is an interpretation of a good economy as an economy that ensures a good life for people (…) a good economy should ensure challenge, engagement, mastery, discovery, and development for people (…) In our view, the industrial policy should focus not only on target-oriented changes in the structure of economic activity and provision of increasing human needs, but also on the formation of a structurally balanced humanitarian and technological space, which is a prerequisite for building a 'good economy.'

A particular role in the formation of successful industrial policy for Russia is played by its regional component. It is the regional industrial policy that allows to use the investment and industrial potential of the regions to address the issues of effective economic restructuring not only in a certain area, but also in Russia in general. Highly uneven development of Russia's territory, small population density in vast areas of Siberia and Russian Far East, unacceptably high gap (28 times) between the subjects of the Russian Federation in terms of per capita GDP makes this issue relevant not only for reducing the socioeconomic inequality of regions, but also for aligning long-term development goals stated in the federal and regional laws on industrial policy [15]. To develop an adequate industrial policy, it is necessary to consider the characteristics of scientific and technological, industrial, resource, and human potential of the regions."

"… when analyzing the effects resulting from the implementation of Washington consensus principles for developing countries, D. Rodrik came to the conclusion that it was impossible to create a set of industrial policy measures that would be applicable to any country. He demonstrated that any reforms should be adapted to specific circumstances, and 'standard projects' of reforms are no longer relevant

in the current environment (…) When it comes to inadmissibility of "standard projects" of regional industrial policy, the relevance of this provision fully applies to Russia."

"The fundamental difference of the fourth industrial revolution is the harmonization and integration of a large number of scientific disciplines, synthesis of resulting technologies, and their interaction in physical, digital, and biological systems. Megatrends of technological development in the era of the fourth industrial revolution can be combined into three units (physical, digital, and biological) … A fundamentally new feature of these megatrends is the fact that digital technology, as the foundations of all new technology solutions, penetrates into all units."

"A somewhat clarified concept of digital economy was provided in the program 'The Digital Economy of the Russian Federation.' In this case, the digital economy is defined as 'an economic activity, in which the key factor of production are data in digital form and which contributes to emergence of the information space by taking into account the needs of citizens and society in obtaining highquality and reliable information, development of information infrastructure of the Russian Federation, creation and application of Russian information and telecommunication technologies, as well as the formation of a new technological foundation for social and economic environment'."

"The subject matter of the digital economy remains a debatable issue. In this discussion, a fundamental matter is the understanding of digital economy as either an economy of exclusively digital objects, or an economy of the subsequent phase in the development of traditional industries and formation of new industries based on the intensified use of the Internet and digital technology. The second interpretation of the subject matter of the digital economy seems to be more legitimate."

Romanova, O A (2018): "Industrial Policy Priorities of Russia in the Context of Challenges of the Fourth Industrial Revolution. Part 1", Ekonomika Regiona = Economy of Regions; Yekaterinburg Iss. 2, (2018): 420-432.

https://www.proquest.com/openview/5ef046d0999e5209bcf1f795ead841ac/1?pq-origsite=gscholar&cbl=5002427

40. Política industrial del govern d'Espanya

"Políticas palanca y componentes. Los 4 ejes transversales a través de los que se distribuyen en España los fondos europeos: transición ecológica, transformación digital, cohesión social y territorial e igualdad de género, se proyectan en 10 políticas palanca … para impulsar la recuperación económica a corto plazo y apoyar un proceso de transformación que aumente la productividad y el crecimiento potencial de la economía española en el futuro.

Estas diez palancas recogen los 31 componentes que articulan los proyectos coherentes de inversiones y reformas para modernizar el país. Aunque la mayoría de ellos tienen carácter horizontal, para el conjunto de la economía, algunos están específicamente dirigidos a impulsar la modernización de sectores tractores, como el comercio, el turismo, el agroalimentario, la salud, la automoción o las propias Administraciones públicas."

Nombre de Palanca	Suma de Total general	Suma de transferencias	Suma de préstamos	% € TOTAL	% TRANSFERENCIAS	% PRÉSTAMOS
Agenda urbana y rural, lucha contra la despoblación y desarrollo de la agricultura	18.817,00 €	14.557,00 €	4.260,00 €	11,5%	18,2%	5,1%
Infraestructuras y ecosistemas resilientes	13.455,00 €	11.650,00 €	1.805,00 €	8,3%	14,6%	2,2%
Transición energética justa e inclusiva	10.581,69 €	10.581,69 €		6,5%	13,2%	0,0%
Una Administración para el siglo XXI	6.526,05 €	4.368,80 €	2.157,25 €	4,0%	5,5%	2,6%
Modernización y digitalización del tejido industrial y de la pyme, recuperación del turismo e impulso a una España nación emprendedora	90.518,66 €	18.765,35 €	71.753,31 €	55,5%	23,5%	86,3%
Pacto por la ciencia y la innovación. Refuerzo a las capacidades del Sistema Nacional de Salud	6.469,79 €	5.899,79 €	570,00 €	4,0%	7,4%	0,7%
Educación y conocimiento, formación continua y desarrollo de capacidades	7.367,07 €	7.367,07 €		4,5%	9,2%	0,0%
Nueva economía de los cuidados y políticas de empleo	6.255,00 €	5.855,00 €	400,00 €	3,8%	7,3%	0,5%
Impulso de la industria de la cultura y el deporte	2.556,50 €	825,00 €	1.731,50 €	1,6%	1,0%	2,1%
Modernización del sistema fiscal para un crecimiento inclusivo y sostenible	483,00 €		483,00 €	0,3%	0,0%	0,6%
Total General (en millones de €)	**163.029,75 €**	**79.869,69 €**	**83.160,06 €**	**100,0%**	**100,0%**	**100,0%**

"**Palanca 1. Agenda urbana y rural, lucha contra la despoblación y desarrollo de la agricultura**

(…) Resulta necesario articular medidas específicas para la España despoblada que impulsen la innovación social y territorial y faciliten el desarrollo de nuevos proyectos profesionales, la fijación de población, la atracción de talento, la prestación de servicios, así como un uso sostenible de nuestros recursos.

- Componente 1: Plan de choque de movilidad sostenible, segura y conectada en entornos urbanos y metropolitanos
- Componente 2: Plan de rehabilitación de vivienda y regeneración urbana
- Componente 3: Transformación ambiental y digital del sistema agroalimentario y pesquero

Palanca 2. Infraestructuras y ecosistemas resilientes

Las infraestructuras tienen la capacidad de movilizar grandes volúmenes de inversión a corto plazo y de generar un impacto estructural sobre el conjunto de la sociedad y la economía (…)

- Componente 4: Conservación y restauración de ecosistemas y su biodiversidad
- Componente 5: Preservación del litoral y recursos hídricos
- Componente 6: Movilidad sostenible, segura y conectada

Palanca 3. Transición energética justa e inclusiva

El desarrollo de un sector energético descarbonizado, competitivo y eficiente permite movilizar inversión privada significativa, aportando certidumbre y un marco normativo previsible, aprovechar el enorme potencial renovable de nuestro país y las cadenas de valor existentes para reforzar la competitividad de cara a los mercados domésticos y de exportación.

- Componente 7: Despliegue e integración de energías renovables

- Componente 8: Infraestructuras eléctricas, promoción de redes inteligentes y despliegue de la flexibilidad y el almacenamiento
- Componente 9: Hoja de ruta del hidrógeno renovable y su integración sectorial
- Componente 10: Estrategia de Transición Justa
- Componente 31: REPowerEU

Palanca 4. Una Administración para el siglo XXI

No es posible abordar una auténtica transformación de la economía y la sociedad sin una Administración pública que actúe como tractor de los cambios tecnológicos, impulsando innovaciones, acompañando al sector privado, activando a los sectores y creando nuevos modelos de negocio replicables y escalables en el conjunto de la economía.

- Componente 11: Modernización de las Administraciones públicas

Palanca 5. Modernización y digitalización del tejido industrial y de la pyme, recuperación del turismo e impulso a una España nación emprendedora

Es necesario abordar una modernización del ecosistema de industria-servicios orientado a la digitalización y transición energética, para ganar en competitividad y contribuir de este modo a los objetivos de desarrollo sostenible.

- Componente 12: Política Industrial España 2030
- Componente 13: Impulso a la pyme
- Componente 14: Plan de modernización y competitividad del sector turístico
- Componente 15: Conectividad Digital, impulso de la ciberseguridad y despliegue del 5G

Palanca 6. Pacto por la ciencia y la innovación. Refuerzo a las capacidades del Sistema Nacional de Salud

No puede abordarse una transformación de país con visión de futuro sin basarse en la ciencia y el conocimiento. La crisis sanitaria ha puesto a la ciencia en un lugar preeminente y ha revelado la insuficiencia de la inversión en ciencia e innovación en general, y en particular en algunos sectores estratégicos determinantes, como la Inteligencia Artificial o el sistema de salud. También la necesidad de participar más activamente en un sistema de investigación paneuropeo más sólido.

- Componente 16: Estrategia Nacional de Inteligencia Artificial
- Componente 17: Reforma institucional y fortalecimiento de las capacidades del sistema nacional de ciencia, tecnología e innovación
- Componente 18: Renovación y ampliación de las capacidades del Sistema Nacional de Salud

Palanca 7. Educación y conocimiento, formación continua y desarrollo de capacidades

El refuerzo del capital humano es fundamental para que el Plan de inversiones y reformas tenga el impacto deseado, tanto en la generación de actividad a corto plazo, como en el refuerzo estructural de la economía y las nuevas oportunidades laborales a medio y largo plazo.

- Componente 19: Plan Nacional de Competencias Digitales (digital skills)
- Componente 20: Plan estratégico de impulso de la Formación Profesional

- Componente 21: Modernización y digitalización del sistema educativo, incluida la educación temprana de 0 a 3 años

Palanca 8. Nueva economía de los cuidados y políticas de empleo

La mejora del funcionamiento del mercado laboral español es un objetivo crucial para el bienestar económico y social. La combinación de la alta tasa de paro estructural y la segmentación entre trabajadores junto con la tendencia a que los ajustes ante situaciones económicas adversas se hagan reduciendo la plantilla no solo genera precariedad, sino que merma la productividad e incrementa la desigualdad. Es preciso abordar mediante el diálogo social un conjunto de reformas que aborden la dualidad y resuelvan los desequilibrios arrastrados del pasado.

- Componente 22: Plan de choque para la economía de los cuidados y refuerzo de las políticas de inclusión
- Componente 23: Nuevas políticas públicas para un mercado de trabajo dinámico, resiliente e inclusivo

Palanca 9. Impulso de la industria de la cultura y el deporte

España cuenta con una gran riqueza en el ámbito cultural y el idioma español es además un importante activo de desarrollo económico y social para el futuro. Junto al importante peso de los sectores más tradicionales (libros, museos, teatros, patrimonio histórico-artístico) es preciso apoyar las iniciativas que se están desarrollando en el ámbito de la producción audiovisual y los videojuegos, aprovechando las oportunidades que proporciona la nueva economía digital.

- Componente 24: Revalorización de la industria cultural
- Componente 25: España hub audiovisual de Europa (Spain AVS Hub)
- Componente 26: Plan de fomento del sector del deporte

Palanca 10. Modernización del sistema fiscal para un crecimiento inclusivo y sostenible

Las medidas económicas y sociales ya adoptadas están permitiendo amortiguar el impacto inmediato de la emergencia sanitaria, pero comportan un importante coste fiscal al que se suma el derivado del ciclo, a través de los estabilizadores automáticos. El aumento del gasto público y de la deuda pública resulta inevitable y está cubierto por los mecanismos extraordinarios de flexibilidad previstos por el Pacto de Estabilidad y Crecimiento.

- Componente 27: Medidas y actuaciones de prevención y lucha contra el fraude fiscal
- Componente 28: Adaptación del sistema impositivo a la realidad del siglo XXI
- Componente 29: Mejora de la eficacia del gasto público
- Componente 30: Sostenibilidad a largo plazo del sistema público de pensiones en el marco del Pacto de Toledo

https://planderecuperacion.gob.es/politicas-y-componentes

"Componente 12: Política Industrial España 2030. La industria manufacturera (excluido el sector energético) representa 12,3% del Valor Añadido Bruto de la economía española, un porcentaje inferior a los países de nuestro entorno. Ello supone un elemento de vulnerabilidad, dada la mayor resiliencia

mostrada ante la crisis financiera y la actual crisis sanitaria, así como una mayor productividad que otros sectores. Se atribuye a la industria un 83% de la exportación total española y ostenta las mayores ratios de estabilidad en el empleo y mayores salarios respecto al resto de sectores económicos. Los principales retos a los que se enfrenta la industria … son:

- La transformación digital basada en los datos en el ámbito de la industria y los servicios.
- El refuerzo de su peso en la economía española y el aumento de la dimensión de las empresas industriales.
- La mejora de la eficiencia en la gestión del agua, los residuos, la energía y de los recursos, emisiones y energías renovables en el marco de la economía circular."

"Este componente contempla una inversión estimada total de 8.356,5 millones de euros de los cuales 6.031,5 millones proceden del Mecanismo de Recuperación y Resiliencia."

"Reformas

C12.R1 Estrategia Española de Impulso Industrial 2030 … articulando nuevas figuras y mecanismos que permita dotar a la industria de resiliencia para hacer frente a los nuevos retos existentes y colaborar a alcanzar una mejora de su competitividad. La norma, de carácter básico, se adecuará a los estándares actuales de la doble transición europea en sostenibilidad y digitalización, así como mecanismos más actualizados de vigilancia de productos en el mercado. La reforma actualizará no sólo los mecanismos de coordinación entre la Administración del Estado y las Comunidades Autónomas."

"C12.R2 Política de residuos e impulso a la economía circular (…) La finalidad … es la prevención y la reducción de la generación de los residuos y de los impactos adversos de su generación y gestión, la reducción del impacto global vinculada al uso de los recursos, y la mejora de la eficiencia de dicho uso con el objeto de, en última instancia, proteger el medio ambiente y la salud humana y efectuar la transición a una economía circular."

"Inversiones

C12.I1 Espacios de datos sectoriales (contribución a proyectos tractores de digitalización de los sectores productivos estratégicos). En línea con la Estrategia Europea del Dato, el objetivo de esta inversión es la puesta en marcha de grandes espacios de datos comunes industriales y seguros, que ayudará al impulso de la innovación empresarial en los principales sectores productivos estratégicos de la economía, entre ellos, el sector agroalimentario, el sector de la movilidad sostenible, el sector salud y el sector comercial, entre otros."

"C12.I2 Programa de impulso de la competitividad y sostenibilidad industrial. Esta inversión pretende principalmente impulsar la transformación de las cadenas de valor estratégicas de sectores industriales con gran efecto tractor en la economía, englobando a todas las partes que operan en esa cadena de valor, desde las empresas emergentes más pequeñas hasta las compañías más grandes, desde el mundo académico hasta el personal investigador y desde los prestadores de servicios hasta los proveedores. Dada la estructura de las empresas industriales en España, se prevé un importante componente de apoyo a la pyme. Se apoyarán principalmente proyectos que se consideren estratégicos para la transición industrial (…) Esta inversión también financiará proyectos de menor magnitud, pero con

entidad propia (…) Por último, esta inversión también financiará el apoyo a infraestructuras industriales sostenibles, desde parques industriales hasta zonas logísticas."

"C12.I3 Plan de apoyo a la implementación de la normativa de residuos y al fomento de la economía circular."

"C12.I4 PERTE CHIP: Fortalecimiento de la cadena de valor de la industria de los semiconductores. Esta inversión tiene como objetivo apoyar los proyectos relacionados con la cadena de valor de la industria de semiconductores con el fin de fortalecer el ecosistema nacional de microelectrónica y ampliar el impacto de la participación de empresas españolas en el IPCEI de Microelectrónica y Tecnologías de la Comunicación."

C12.I5 Esquema de ayudas para apoyar sectores clave de la economía circular.

C12.I6 Apoyo a proyectos estratégicos de la cadena de valor del vehículo eléctrico (subvenciones)."

C12.I7 Apoyo a proyectos estratégicos de la cadena de valor del vehículo eléctrico y agroalimentario (préstamos)."

https://planderecuperacion.gob.es/politicas-y-componentes/componente-12-politica-industrial-espana-2030

41. Nou paradigma de la política econòmica

"Productivism is an approach that prioritizes the dissemination of productive economic opportunities throughout all regions of the economy and segments of the labor force. It differs from neoliberalism in that it gives governments (and civil society) a significant role in achieving that goal. It puts less faith in markets and is suspicious of large corporations. It emphasizes investment in productive activities over investment in financial products, and revitalizing local communities over globalization. It also departs from the Keynesian welfare state in that it focuses less on redistribution, social transfers, and macroeconomic management and more on creating economic opportunity by working on the supply side of the economy to create good, productive jobs for everyone. And productivism diverges from both of its antecedents by exhibiting greater skepticism towards technocrats and being less instinctively hostile to populism in the economic sphere."

"Our core economic problems – poverty, inequality, exclusion, and insecurity – … are reproduced and reinforced … as an immediate by-product of firms' employment, investment, and innovation decisions (…) These decisions are rife with externalities for society (…) Some of these externalities are well recognized in economics. Learning and innovation spillovers from R&D form the rationale for tax credits and other public subsidies. Environmental externalities and the effects of greenhouse gas emissions on climate change form the basis for environmental regulation.

But in our contemporary world, these externalities are broader and also include what may be called 'good jobs' externalities. 'Good jobs' are jobs that pay sufficiently well to allow for a reasonable living standard with some security and savings, are relatively stable and with safe working conditions, and offer some career progression (…) A shortage of good jobs comes at social, political, and economic costs (…) The prevalence of 'bad jobs' is also symptomatic of economic dualism, which creates its own

inefficiency: productive technologies remain bottled up in a few firms and do not disseminate throughout the rest of the economy and the labor force."

"When a company decides to automate its production line or outsource part of its production to another country, society may suffer long-term damage that is not 'internalized' by its managers or shareholders. Framing the problem in terms of an 'externality' – or as a 'coordination failure' … – clarifies that productivism is about productivity first and foremost, and not about redistribution or social/labor standards. But it does not presume productivity trickles down."

"Productivism requires an explicit quid pro quo between private firms and public authorities. To prosper, firms need a reliable, healthy and skilled workforce, good infrastructure, an ecosystem of suppliers and collaborators, easy access to technology, and a sound regime of contracts and property rights. Most of these are provided through public and collective action, which is the government's side of the bargain. Governments in turn need firms to internalize the various externalities they produce for their communities and societies when they make their labour, investment, and innovation decisions."

"Productivism focuses on enhancing the productive capabilities of all segments and regions of a society (…) Policies must directly encourage an increase in the quantity and quality of jobs that are available for the less educated and less skilled members of the workforce (…) In the future the bulk of these jobs will come not from manufacturing, but from services."

"This is important since so much of the policy effort in the U.S. is focused on promoting high-tech manufacturing (…) The initiative is aimed at both enhancing national security vis-à-vis China and creating good jobs. Unfortunately, … a strategy fixated on geo-political competition with China will not be very effective on the jobs front. The advanced semiconductor industries promoted … are highly capital and skill-intensive and do little for job creation.

A similar point can be made about the subsidies to green technologies that are a core component of the 'Inflation Reduction Act.' (…) But here too, governments cannot kill two birds with one stone. Green technologies will not create many new jobs on net, and the jobs they create will often not be in the distressed regions that need them the most. Policies that target climate change are not a substitute for good-job policies, and vice versa. Shoring up the middle class and disseminating the benefits of technology broadly through society requires an explicit good-jobs strategy."

"If the future of good-job creation is mostly in the service industry, the question then arises: Is an industrial policy for services possible? Enhancing productivity in services is notoriously difficult."

"My proposed program has both a local and a national component. The local approach would build on existing development and business assistance programs … These are collaborative partnerships between local development agencies, firms, and other partners aiming to revitalize local communities and create good jobs. They are organized around an implicit (and evolving) quid pro quo: the provision of public services (such as business extension services, infrastructure, or customized training) in return for soft commitments by firms on investment and employment creation.

The federal initiative would be the establishment of an Advanced Research Projects Agency (ARPA) focused on the promotion of employment-friendly technologies: ARPA-W(orkers). Starting from the premise that innovations that complement rather than displace workers are feasible yet currently

undersupplied, ARPA-W would promote early-stage investments in digital and other technologies that enhance prevailing worker skills and create good jobs."

"In this paradigm, the conventional separation between growth policies and social policies no longer makes sense. Faster economic growth requires new technologies and productive opportunities to be disseminated among smaller firms and wider segments of the labour force and that their use not be confined to narrow segments of the elite. And reducing inequality and economic insecurity is more effective when it happens through better employment prospects than via fiscal redistribution only. The growth and social agendas effectively merge."

"Neoliberalism promoted freer markets and freer trade, and discouraged government intervention (…) Aren't those precisely the policy conclusions that students in economics courses are taught? And weren't deregulation, tight money and fiscal austerity, weakening of labor market institutions, and hyper-globalization promoted using the ideas of (and by) leading members of the economics profession? Since the answers to both questions are yes, the demise of neoliberalism should perhaps prompt us to jettison mainstream economics as well."

"Unlike what many of its critics believe, where policy preferences are concerned mainstream economics comes paradigm-free in its sophisticated, seminar-room version, and can be used to support any number of conflicting policy paradigms. What disciplines this immense flexibility is logical rigor (which helps clarify the critical conditions under which any policy recommendation holds) and systematic evidence (which tries to map those conditions to the real world in specific settings) … Neoliberalism was in fact bad neoclassical economics."

Rodrik, Dani (2023): "A New Paradigm for Economic Policy and the Role of Mainstream Economics" https://www.postneoliberalism.org/articles/a-new-paradigm-for-economic-policy-and-the-role-of-mainstream-economics/

42. Nova macroeconomia?

"… macro research must meet two standards to keep the field moving in a productive direction: models must be tested empirically and researchers must think carefully about how underlying assumptions restrict the set of questions that can be answered with a given model. Models move knowledge forward through rigorous empirical testing (…) In recent decades, macro research has tilted very heavily towards theory, forgoing the feedback generated by rigorous empirical testing (…) It's not an accident that many of today's best macroeconomists stand out for their work in both theory and empirics: empirical work disciplines their theoretical research."

"Over the past 40-50 years, research in short-run macroeconomics has focused on the goal of creating unified, internally consistent models of the macroeconomy … The emphasis on developing a central baseline model to which idiosyncratic features are added for addressing a specific problem discourages many researchers from considering the suitability of the underlying model to the specific question being asked (…) The relevant question is not whether a model is good or bad but whether it is good or bad for answering a specific question."

"The greatest success of macro over the past decade has been the integration of the financial sector into macro models (…) Another area of macro that has seen significant progress in the last decade is more realistic modeling of household behavior. The addition of liquidity constraints; heterogeneity; and limits to attention, information, and foresight have begun addressing key weaknesses in the standard models. These and other promising developments in recent macro research share a few key features: they incorporate insights from behavioral economics, they focus on mechanisms, and they are deeply influenced by empirical research using microeconomic data."

"Using micro data to study macroeconomic mechanisms has gained popularity in recent years, particularly in research areas such as macro finance and macro labor."

"Macroeconomic history provides additional avenues for empirical research in two ways: by expanding macroeconomic data sets and by allowing researchers to analyze a larger array of macroeconomic events and settings using micro data. Going further back in time expands the sample of major macroeconomic events: recessions, financial crises, and major wars were quite frequent between 1800 and 1950 (the period usually excluded from modern macro research but for which substantial data is available)."

Brunet, Gillian (2021): " New Directions in Macroeconomics", Policy Brief 33
https://econfip.org/policy-briefs/new-directions-in-macroeconomics/

43. Política industrial britànica durant la Primera Revolució Industrial

"For centuries before the Industrial Revolution, ruling elites used their political power to block or constrain technological and economic development in many countries from China to Europe with motivations to protect their power, keep economic rents, or avoid social disturbances (…) However, during the 18th century, the British ruling elite never tried to block industrialization altogether. On the contrary, they generally promoted it."

"The existing literature proposes three explanations for this question:

- The first one is that the ruling elite benefited from the commercialized and industrializing economy during the 18th century (…)
- The second explanation is that regardless of whether the ruling elite benefited from the expanding economy, the main factor was that industrialization did not threaten their political power, especially in the short term.
- And, the third explanation is the pressure of international competition, that is, economic and military rivalry among Western European countries during the 18th century.

However, these explanations depend on little to no direct empirical investigation."

"My findings: … the cotton industry entered Parliament's agenda after the 1770s as a result of its growth with the impact of mechanization. After its entrance, Parliament tried to support the cotton industry with a protectionist foreign trade policy, avoiding heavy taxation, and protecting machinery from technologically conservative groups.

In the ruling elite's supportive policies, two publicly motivated factors were influential: The first was increasing employment levels and, thereby, combating poverty and potential social disturbances (…) Secondly, the ruling elite was motivated by the fear of lagging behind other countries, especially France, economically and militarily, and supported the cotton industry to sustain the international competitiveness of the British economy."

"Britain's undemocratic political system, essentially closed to ordinary workers and artisans, helped the ruling elite to reject the demands of technologically conservative groups. Moreover … the ruling elite acted as an arbiter against the demands of industrialists and merchants, eliminating any possibility of blocking mechanization in the cotton industry upon the pressure of other textile branches.

"… the majority of the main speakers in Parliament were high-ranking statesmen acting with public motivations. Also, although the majority of the ruling elite prioritized landed interests, this never turned into a total blocking of technological and industrial development."

"I find highly limited evidence … that the ruling elite benefited from the commercialized and industrializing economy. There is, again, highly limited evidence … that industrialization was not a threat to the ruling elite's political power. However, there is clear evidence for the third hypothesis: economic and military competition among countries in Western Europe pushed the British ruling elite to support industrialization. It is possible to observe the impact of this motivation in almost all the supportive policies of Parliament: suppressing the anti-machinery riots, avoiding heavy taxation, keeping raw material-rich colonies, preventing physical capital from moving abroad, and protectionist foreign trade regulations.

As a result, what distinguished Britain during the 18th century from its historical precedents that blocked technological and industrial development was the high pressure of international competition, a ruling elite who understood the long-term merits of mechanization related to employment, and a political system that prevented the dominance of private interests over these factors."

Gülsunar, Emrah (2024): "To Block or Not: Why the British Ruling Elite Enabled the Industrial Revolution during the 18th Century"
https://ehes.org/2024/04/24/to-block-or-not-why-the-british-ruling-elite-enabled-the-industrial-revolution-during-the-18th-century/

44. Per què va ser britànica la Primera Revolució Industrial?

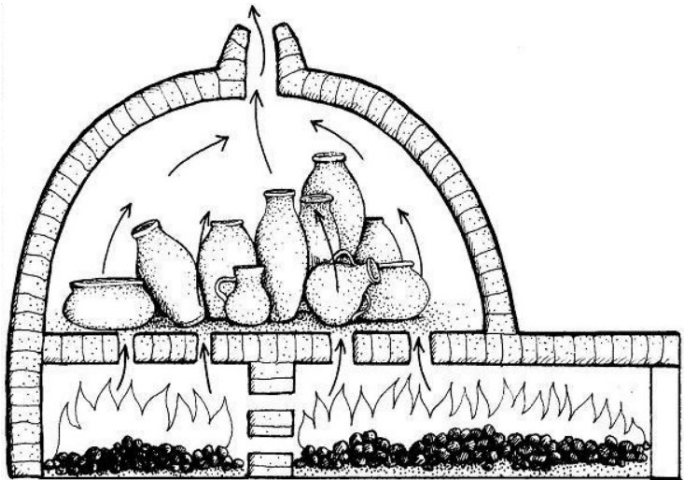
"Why did the Industrial Revolution take place in eighteenth century Britain and not elsewhere in Europe or Asia? (…) The Industrial Revolution was Britain's creative response to the challenges and opportunities created by the global economy that emerged after 1500.

This was a two step process. In the late sixteenth and early seventeenth centuries a European-wide market emerged. England took a commanding position in this new order as her wool textile industry out competed the established producers in Italy and the Low Countries. England extended her lead in the late seventeenth and eighteenth centuries by creating an intercontinental trading network including the Americas and India. Intercontinental trade expansion depended on the acquisition of colonies, mercantilist trade promotion, and naval power.

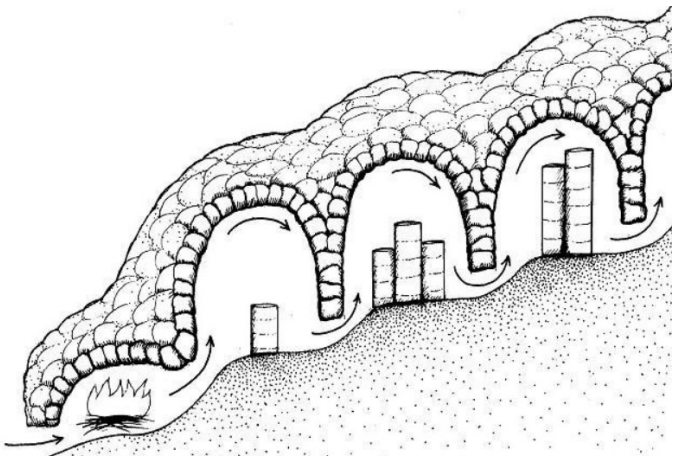
The upshot of Britain's success in the global economy was the expansion of rural manufacturing industries and rapid urbanisation. East Anglia was the centre of the woollen cloth industry, and its products were exported through London where a quarter of the jobs depended on the port. As a result, the population of London exploded from 50,000 in 1500 to 200,000 in 1600 and half a million in 1700. In the eighteenth century, the expansion of trade with the American colonies and India doubled London's population again and led to even more rapid growth in provincial and Scottish cities. This expansion depended on vigorous imperialism, which expanded British possessions abroad, the Royal Navy, which defeated competing naval and mercantile powers, and the Navigation Acts, which excluded foreigners from the colonial trades. The British Empire was designed to stimulate the British economy– and it did."

"Success in international trade created Britain's high wage, cheap energy economy, and it was the spring board for the Industrial Revolution. High wages and cheap energy created a demand for technology that substituted capital and energy for labour."

"In England, it was not worth spending a lot of money to build a thermally efficient kiln since energy was so cheap. In China, however, where energy was expensive, it was cost effective to build thermally efficient kilns. The technologies that were used reflected the relative prices of capital, labour, and energy. Since it was costly to invent technology, invention also responded to the same incentives (…) The famous inventions of the Industrial Revolution were responses to the high wages and cheap energy of the British economy. These inventions also substituted capital and energy for labour."



English kiln



Chinese kiln

"These technologies eventually revolutionised the world, but at the outset they were barely profitable in Britain, and their commercial success depended on increasing the use of inputs that were relatively cheap in Britain (…) The French government was very active in trying to promote advanced British technology in the eighteenth century, but its efforts failed since the British techniques were not cost effective at French prices."

"The Industrial Revolution was confined to Britain for many years, because the technological breakthroughs were tailored to British conditions and could not be profitably deployed elsewhere (…) By the middle of the nineteenth century, advanced technology could be profitably used in countries like France with expensive energy and India with cheap labour. Once that happened, the Industrial Revolution went world wide."

Allen, Robert (2009): "Why was the Industrial Revolution British"
https://cepr.org/voxeu/columns/why-was-industrial-revolution-british

45. Industrialització i política

"Political structure is a vital component of industrial revolutions. A certain degree of stability, a reasonably clear legal structure, a capacity to restrain worker protest, and some active encouragement—as in building new infrastructure—are common components.

Political disarray in some regions certainly helps explain why industrialization fails to take strong root. But is there a best political form? During the Cold War and beyond, many Western nations urged liberal democracy as the most suitable framework. What advantages might a democracy offer for a solid industrial revolution? In fact, however, the linkage can be questioned."

"The rise of the Pacifc Rim certainly suggested the relevance of authoritarian structures, if appropriately motivated toward economic change. Later, China's impressive example of industrialization under strict government control pushed the linkage even further, and by the twenty-frst century ambitious Chinese leaders were explicitly arguing that theirs was the most appropriate political model for aspiring economies. Why might authoritarianism,whatever its other drawbacks, provide a useful framework?

Of course debate does not have to end with the beginning of industrialization. Most Pacifc Rim countries, like Japan after World War II, also provided vivid examples of the possibility of converting to active democracy once the industrial process was actively under way. Indeed, while granting regional diversity, a good argument can be made, both historically and in principle, that democracy may be the best form over the long haul, in consolidating and maintaining industrial change. How might this linkage be defended and explained?"

Stearns, Peter N. (2021): *The Industrial Revolution in World History*, Routledge, pp 202-3.

46. La industrialització de Japó

"**The Meiji Restoration (1868-1912)**

The Meiji Restoration was a turning point in Japan's history that marked the beginning of its industrialization journey. In 1868, the Tokugawa shogunate was overthrown, and the imperial rule was restored under Emperor Meiji. Determined to catch up with Western powers, Japan's leaders embarked on a program of rapid modernization and industrialization.

- **Sakichi Toyoda (1867-1930)**

One of the notable figures during this period was Sakichi Toyoda, a talented inventor and entrepreneur who is often referred to as the father of Japan's industrial revolution. He revolutionized the textile industry by inventing the automatic power loom, which greatly increased the efficiency of textile production. This innovation not only transformed Japan's textile industry but also laid the groundwork for the Toyota Motor Corporation, one of the world's leading automotive manufacturers.

- **Eiichi Shibusawa (1840-1931)**

Another significant figure in Japan's industrialization was Eiichi Shibusawa, a prominent businessman and industrialist. He founded the First National Bank of Japan and played a crucial role in the development of the country's modern financial system. Shibusawa also helped establish over 500 companies in various industries, including textiles, railroads, and steel, contributing immensely to Japan's economic growth.

- **Yataro Iwasaki (1835-1885)**

Yataro Iwasaki, the founder of Mitsubishi, was another key player in Japan's industrialization. His vision for a diversified business led to the establishment of the Mitsubishi Zaibatsu, which played a significant role in the development of Japan's shipping, mining, and heavy industries. The Mitsubishi conglomerate would later evolve into one of the most influential corporations in Japan and the world.

The Taisho Democracy (1912-1926)

The Taisho period saw the continuation of Japan's industrialization efforts and the growth of democracy. It was during this era that Japan emerged as a major industrial and military power.

- **Korekiyo Takahashi (1854-1936)**

Korekiyo Takahashi, a prominent Japanese statesman and financier, served as the governor of the Bank of Japan and later as Prime Minister. He implemented various economic policies that promoted industrialization, including the gold standard, which stabilized Japan's currency and stimulated economic growth. Takahashi's prudent fiscal policies helped Japan navigate the economic challenges of the post-World War I era.

- **Inazo Nitobe (1862-1933)**

Inazo Nitobe, a prolific writer and educator, contributed to Japan's industrialization by promoting international understanding and cooperation. As an influential figure in the League of Nations, Nitobe sought to strengthen Japan's ties with other nations, fostering a global environment that facilitated economic growth and industrialization.

The Showa Era (1926-1989)

The Showa era, which began with the reign of Emperor Hirohito, was marked by both remarkable economic growth and the devastation of World War II. Despite the challenges, Japan's industrialization continued to progress, thanks to the resilience and determination of its people and the ingenuity of its leaders.

- **Kiichiro Toyoda (1894-1952)**

Kiichiro Toyoda, the son of Sakichi Toyoda, was instrumental in transitioning the family's business from textiles to automobiles. In 1937, he founded the Toyota Motor Corporation, which would go on to

become a global leader in the automotive industry. Kiichiro's vision and innovation helped to establish Japan as a major player in the global automobile market.

- **Soichiro Honda (1906-1991)**

Soichiro Honda, the founder of Honda Motor Co., was another pivotal figure in Japan's industrial development during the Showa era. He started his company in 1948, initially focusing on motorized bicycles. Honda later expanded into motorcycles and automobiles, with innovative designs and cutting-edge technology that garnered international acclaim. Honda's success contributed significantly to Japan's reputation as a world leader in automotive manufacturing.

Post-War Recovery and the Japanese Economic Miracle

The devastation of World War II left Japan's industries in ruins, but the nation's resilience and determination to rebuild led to an unprecedented economic boom, often referred to as the Japanese Economic Miracle.

- **Shigeru Yoshida (1878-1967)**

Shigeru Yoshida, a prominent Japanese diplomat and politician, played a key role in shaping Japan's post-war economic policy. As Prime Minister, he pursued a strategy of close cooperation with the United States and focused on rebuilding Japan's economy through industrial expansion. Yoshida's policies laid the foundation for Japan's rapid economic growth in the decades that followed.

- **Hayato Ikeda (1899-1965)**

Hayato Ikeda, another influential Japanese Prime Minister, implemented the Income Doubling Plan in 1960, aiming to double Japan's national income within ten years. His policies encouraged investment in infrastructure, education, and research, which fueled rapid industrial growth and propelled Japan into the ranks of the world's leading economies.

- **Akio Morita (1921-1999) and Masaru Ibuka (1908-1997)**

The founders of Sony Corporation, Akio Morita and Masaru Ibuka, played a significant role in Japan's post-war industrial success. They established the company in 1946 and went on to produce groundbreaking consumer electronics, such as the first transistor radio and the Walkman portable music player. Their innovations not only revolutionized the global electronics market but also helped solidify Japan's reputation as a technological powerhouse."

Japan Industry News Staff Writer (2023): "Japan's Industrialization: Key Players and Milestones" https://www.japanindustrynews.com/2023/04/japans-industrialization-key-players-and-milestones/

47. Estratègia industrial de la UE unificada?

"The EU needs a common strategy in response to Chinese interventionism and US protectionism, the economic and business ministers of France, Germany and Italy said after meeting to discuss European industrial policy in Meudon, near Paris (…)

‘What strikes me is that everybody in the world has an economic strategy, except for Europe,’ French finance minister Bruno Le Maire told his counterparts as he opened the third such trilateral meeting (…) ‘It’s our duty as the ministers of Europe’s three most powerful economies, representing more than 60% of European wealth, to define this economic strategy for the twenty-first century,’ he said.”

“Le Maire was joined by Robert Habeck, German federal minister for economic affairs and Italian business minister Adolfo Urso (…) ‘Does Europe simply want to be a creator of standards, or can we imagine a Europe where the continent would be an important geopolitical actor?’ Habeck said after the meeting. ‘The three of us agree that the latter is the right answer.’ Even having the discussion is a sign of how the political climate has changed, said Le Maire. ‘The term ‘industrial policy’ is no longer taboo. A few years ago, when I was starting out as finance minister, you couldn’t pronounce the words ‘European economic policy’ or ‘European industrial policy’.”

“The ministers agreed that simplification for businesses should be at the heart of this strategy (…) They want the EU to extend the reporting exemptions given to SMEs, from companies with up to 250 employees, to those with up to 500 employees.”

“There was also an acknowledgement that EU social and environmental regulations are impacting competitiveness in areas such as green energy and electric vehicles, by opening the door to cheap imports from countries with weaker standards. ‘The problem with decarbonisation is it’s very expensive. All of our products are and will remain more expensive than those of our Chinese or American competitors,’ Le Maire said. ‘Europe needs to show its teeth, and show that it’s determined to defend its industry.’

But there was disagreement over the best way to achieve this. Le Maire suggested introducing a ‘European preference’ in public procurement, which would require 50% of the tender to be reserved for European production. ‘If you deploy an offshore wind farm in the North Sea, the Mediterranean, or the Atlantic coast, 50% should come from European industry. It’s what the Chinese do, it’s what the Americans do,’ he said.”

“Italy on the other hand is ‘rather neutral’ about the instruments used, as long as they contribute to making Europe a technological hub, said Urso. ‘We believe it is necessary to move from an economy based on consumers, to an economy based on producers,’ he said, speaking on behalf of his French and German counterparts. ‘The focus on consumption has benefited products coming from other continents which don’t have the same rules in terms of social standards and workers’ rights.’”

“The three countries said the EU should provide increased support to strategic industries (…) To encourage more private investment the EU should be more ambitious in the implementation of the Capital Markets Union (…) The ministers also agreed that more investment is needed in security and defence.”

“Le Maire … invited his counterparts to consider launching a ‘European artificial intelligence community’ modelled on the European Coal and Steel Community, ‘to pool our means in terms of artificial intelligence, and to allow us to gain in productivity.’

The first tripartite meeting in Berlin in June 2023 focused on securing Europe's supply of critical raw materials, and the ministers met again in Rome last October to discuss AI. The next meeting will take place in Germany in October or November, and is likely to focus on aerospace and defence."

Greenacre, Martin (2024): "France, Germany, Italy call for single EU industrial strategy", 9 Apr 2024
https://sciencebusiness.net/news/industry/france-germany-italy-call-single-eu-industrial-strategy

48. La declaració d'Anvers (*The Antwerp Declaration for a European Industrial Deal*, 20/02/2024)

"The undersigned companies and organisations express their full support for a European Industrial Deal to complement the Green Deal and keep high quality jobs for European workers in Europe.

There is an urgent need for clarity, predictability, and confidence in Europe and its industrial policy. As very clearly stated by the Belgian PM Alexander De Croo: 'We need our industry for their innovation capacity. To come up with tomorrow's climate solutions. That is why Europe should not only be a continent of industrial innovation, but should remain a continent of industrial production'.

To meet climate neutrality by 2050 and the recently communicated 2040 target, Europe's electricity production will need to multiply, and industry investments will need to be a factor six higher than the previous decade. This enormous challenge comes just as both large companies and SMEs face the most severe economic downturn in a decade, demand is falling, production costs increase and investments move to other regions.

A US economy that benefits from the financial support from the Inflation Reduction Act (IRA) and its ease of accessibility, a Chinese overcapacity and increasing exports to Europe all increase the pressure for the European industry even more. Our companies face this challenge every day. Sites are being closed, production halted, people let go. Europe needs a business case, urgently.

An Open Strategic Autonomy for a competitive and resilient EU is crucial for the transition of Europe in an ever changing geopolitical landscape. It can however only be achieved if also basic and energy intensive industries remain and invest in Europe. Without a targeted industrial policy, Europe risks becoming dependent even on basic goods and chemicals. Europe cannot afford this to happen."

"This needs to be a European approach, instead of twenty-seven different national incentives, by keeping and strengthening the integrity of the internal market while keeping global competition better into account.

We need to keep industry in Europe because the industry will deliver the climate solutions Europe needs. Solutions that citizens and governments can use, but that can only be invented and implemented with speed and scale by the industry, and the support from governments. Only with a strong industrial fabric and strengthened social dialogue in Europe can we ensure that the green transition will be a Just Transition, as agreed in the Val Duchesse tripartite declaration. A competitive European industry, based on a European Industrial Deal, is the 'conditio sine qua non' for the successful delivery of the EU Green Deal. It is also the only way to show to the rest of the world that the Green Deal works for all."

"Our Declaration calls to Member State Governments, the next European Commission and Parliament to:

1. Put the Industrial Deal at the core of the new European Strategic Agenda for 2024-2029
2. Include a strong public funding chapter with a Clean Tech Deployment Fund
3. Make Europe a globally competitive provider of energy
4. Focus on the infrastructure Europe needs
5. Increase the EU's raw materials security
6. Boost demand for net zero, low carbon and circular products
7. Leverage, enforce, revive and improve the Single Market
8. Make the innovation framework smarter
9. A new spirit of law-making

   Let entrepreneurship thrive to find the best solutions to overcome challenges. Legislation should create incentives for businesses to invest in clean technologies. Avoid that the Green Deal policy targets are followed by prescriptive and detailed implementing regulations. Prevent over reporting, ensure coherence, stay tuned with industrial reality and integrate legislative proposals through a stronger Secretariat General and Regulatory Scrutiny Board which systematically applies a Competitiveness Check and a European Innovation Stress Test against which each new legislation and policy initiative should be evaluated. Use robust data and scientific evidence for effective policymaking. Assess the cumulative impact of legislation.

10. Ensure the structure allows to achieve results

    Install a First Vice-President responsible for the delivery of the European Industrial Deal and for ensuring the seamless integration of legislation and alignment with the agenda of the next European Commission, overseeing the key DG's for the Industrial Deal in one integrated approach."

https://antwerp-declaration.eu/