Política industrial | Selección de textos

2. Historia mínima de la política industrial en los países desarrollados

2.1. Política industrial en el Reino Unido y los EEUU

2.2. Política industrial en la Europa continental (sección ampliada en 5.2)

2.3. Política industrial en Asia: Japón, Corea del Sur, China

5. Presente y futuro de la política industrial

5.1. Geoeconomía de la política industrial

5.2. Iniciativas recientes de política industrial e informe Draghi

5.3. Financiación de la política industrial y déficit público

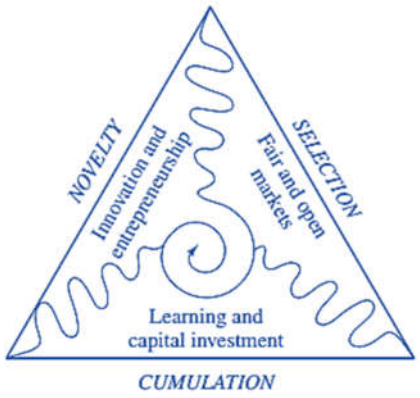


Figure 9.4 Three requirements for an economic system to achieve growth and structural change

"Figure 9.4 summarizes the major intuition (…) Its purpose is to define those general functions which the economic system must achieve in order to enable both growth and structural change. The idea rests upon the well-known trinity of fundamental forces of evolutionary change: (i) variation, (ii) cumulation and (iii) selection. It is based on the view that any kind of evolutionary change, including technological innovation or structural adjustment, depends on the simultaneous interplay of all three forces (…) These very abstract principles are then projected into the realm of economics, defining what the system should achieve in order to support Schumpeterian industrial development: (i) the introduction of novelty through innovation and entrepreneurship; (ii) the accumulation of productive resources through learning and capital investment; and (iii) competitive selection through fair markets. Appropriate policies can then be assigned to these specific functions. Examples are R&D policies or start-up policies, each of them fostering the entrepreneurial function of generating novelty. Education and training, as well as investment policies, including the marketing of business locations to foreign investors, can be attributed to the second pillar of learning and capital accumulation. Finally, competition policy, market liberalization and economic integration are prime examples of policies responsible for guarding fair principles of selection in open markets."

Peneder, Michael (2004): "High growth with 'old' industries? The Austrian Paradox revisited", cap. 9 en Foster, John; Werner Holzl; eds.: *Applied Evolutionary Economics and Complex Systems*, Edward Elgar, pp. 197-219.

2. Historia mínima de la política industrial en los países desarrollados

El fracaso del desarrollo en África

"Africa's 'lost quarter century,' along with the economic meltdown of the former Soviet Union and Eastern Europe in the transition to a market economy, possibly ranks as among the worst economic disasters since the Industrial Revolution. The lost quarter century was a period not just of deindustrialization but also of declining per capita income."

"… much of the growth in Africa since the turn of the century is attributable to booming commodity prices and hydrocarbon discoveries. But there are many instances in various parts of the world of resource-rich countries mismanaging their wealth, demonstrating that an abundance of resources and booming prices are no guarantee of success."

"The period of Africa's severest economic decline, from 1980 to 1995, was an era of a multitude of reform programs reflecting external advice and conditionalities based on a brand of economics that came to be labeled the 'Washington Consensus' (WC). These policies reflected what became the dominant orthodoxy in economics: neo-liberalism (…) For the unabashed proponents of the Washington Consensus, the problem was not that the policies were mistaken but that they needed to be intensified and implemented better. The failures of policies also gave rise to a search for other ingredients of successful development, going beyond the Washington Consensus— including notably a focus on 'governance.'"

"Policies have to be designed to be able to be administered by governments with particular competencies. The failure to do so was certainly central to the failure of the WC policies. But policies should also have aimed to strengthen competencies; instead, many of the WC policies actually worked in the opposite direction."

"… economics does not have much to offer as solutions to states that are failed or mired in armed conflict; but it is too simple to blame economic failure on political failure. The former also contributes to the latter."

"The continuing controversies arise in part from the difficulties of establishing indisputable causal links between economic policies and outcomes. Reform programs may fail because of their inherent weaknesses (bad policies, or at least policies inappropriate to the circumstances of the economy), because they are not adequately implemented, or because of unanticipated exogenous shocks, and it is often difficult to parse out the relative role played by each of these."

"… one lesson of the failed programs in Africa is that reforms need to be mindful not just of the second-best dilemma but also of the absorptive capacity of the country—not only governmental capacity but also the ability of agents to digest and respond to a myriad of changes."

"Moreover, no set of reforms is ever perfect. Any successful implementation process must entail learning about both what is working and what is not. Successful reform programs thus must create institutional frameworks for learning and adaptation. In addition, to be sustainable, reforms have to have 'political buy-in.' They cannot be seen to be imposed by outsiders, especially when those outsiders lack legitimacy as a result of a conflict of economic interests or a colonial heritage. Conditionality was, as a result, often counterproductive."

"… perhaps the most notable case of combining fast and slow reforms is that of China; its success stands in marked contrast with the 'shock therapy' of the former Soviet Union (…). In China the initial focus was predominantly if not exclusively on agriculture, and subsequently on two-track price reforms and creating Township and Village Enterprises. Only later did it engage in large-scale privatizations. As another example: it first invited foreign firms only in joint ventures; much later, it allowed foreign financial firms to enter, and then only with extensive restrictions, and it still has not fully liberalized its capital accounts. In the case of the other mega country, India, a different sort of gradualism may have worked (…) The issue is thus not one of how fast or how slow, but one of priorities and sequencing given the country's capacities for implementation, the transactions and opportunity costs of any set of policy measures, and the country's ability to assimilate information about the successes and failures of each policy measure and to adapt the policies in response. An approach that allows for experimentation and flexibility with successes scaled up and failures quickly abandoned is an important ingredient of success."

"The question of why the neo-liberal reforms did not work as expected led to a renewed interest in institutions (…) The failure of the 'good policies' of 'getting prices right' prompted those multilateral institutions and aid donors advocating such policies to turn their attention to an institutional agenda. There is a large literature on the development state emphasizing the role of the state in successful development (…) This literature notes the important role the state played in creating institutional mechanisms for interventions that accelerated development. What constitutes good institutions, how they are created, and how institutional deficiencies are addressed are vital for developmental success, but there are no easy answers."

"Belatedly, as the failure of the WC policies became evident, blame was shifted to deficiencies in public governance. These concerns led to the emergence of a particular agenda of institutional reforms in Africa under the label of 'good governance' (GG). This agenda was based on a particular view of the relative roles of the state and markets. It assigned what Meles Zenawi (…) refers to as a 'night-watchman' role for the state, confining it to what is required to make markets work better (…) The GG agenda has been used to promote a particular view of which institutions are important for development and how they should be designed: a view that is embedded in neo-liberalism and its precepts on the relative roles of the state and markets, and a view that gives short shrift to other institutional arrangements, such as the role of cooperatives and other not-for-profit institutions. This view is profoundly ahistorical. It sees flawed public institutions as hindrances to markets performing in the way neo-liberalism presumes them to. It neglects attention to institutions that improve on or substitute for markets (for example, by addressing market failures). An influential argument for the importance of the standard GG agenda is based on astatistical relationships between growth and governance as measured by the standard indicators."

"What is needed is not a simplistic one-size-fits-all GG agenda, but a pragmatic one that is tailored to the particular stage of development, the key issues confronting economic management at that stage, and the particular circumstances of the country. The so-called developmental states of East Asia, as well as those in which development occurred before World War II, intervened successfully in ways that required governance capacities other than simply those adumbrated under the GG agenda. The growth-enhancing governance reforms that we advocate here prioritize those

capabilities that facilitate *learning*, in particular via industrial policies (…). Africa's experience highlights the importance of not neglecting such policies. Markets on their own typically do not manage structural transformations well. This is true even in developed countries, but even more so in developing countries. What is needed are industrial and trade policies that promote learning."

"In one sense, industrial policies are unavoidable: all countries have industrial policies whether they know it or not. Public expenditure (for example, the location of highways and the design of the education system) and regulatory and legal regimes (for example, bankruptcy law) affect the utilization of resources. Our concern here, however, is narrower: we are concerned with the deliberate actions intended to promote particular kinds of activities, especially those that have come to be referred to as learning, industrial, and technology (LIT) policies (we will use that term interchangeably with the more familiar 'industrial policy'). Such policies are directed at improving the dynamic capacities of the economy. Allocating a given amount of resources at a point in time in a way that is consistent with static efficiency, as desirable as it may seem, may actually impede development and growth. These phenomena and the associated societal transformation depend on learning in all of its forms—including closing the knowledge gap that separates developing and developed countries."

"… there may be a conflict between policies that enhance static efficiency and those that contribute to learning (…) Striking the right balance is at the core of success in achieving growth and development. The neo-liberal WC policies paid no attention to learning, seemingly unaware of the potential conflict, and thus failed to strike the right balance. Patent laws illustrate the trade-off: they restrict the availability of knowledge, a public good, and confer monopoly power, thus entailing static inefficiency, but the rationale for these 'distortions' is that the resulting loss in static efficiency will be more than offset by the dynamic gains from investment in new technologies that they encourage."

"The proponents of the Washington Consensus focused on the risks and failures of attempts to promote learning with industrial policies. They suggested that such policies were inevitably costly and invariably doomed to failure. Indeed 'industrial policy' acquired such bad connotations that it could be said to have become unmentionable in polite company. Countries embarking on such policies have struggled to find other names. But recent years have provided a strong theoretical basis for such policies in the market failures inevitably associated with learning and structural transformation. Moreover, there have been notable historical successes of such policies—not only in East Asia, but even in the United States. Africa's experience shows the enormous price of neglecting the pursuit of these policies."

"There are, of course, good theoretical reasons why LIT policies are desirable. They focus on learning, especially by infant industries and economies (which are so prototypical in Africa); they address externalities, knowledge spillovers, coordination failures, and deficiencies in risk and capital markets. They are not or at any rate need not be about picking winners and losers (…) One of the major risks of LIT policies that its critics have emphasized is that such policies are vulnerable to capture and corruption. But such risks are by no means the preserve of LIT policies, as illustrated by the fact that central banks in the advanced industrial country were 'captured' by the financial

sector they were supposed to regulate. Indeed the agenda of liberalization and privatization in Africa, as elsewhere, that was argued for on the basis that it would limit the scope for capture and corruption, was actually 'captured' and became the source of enormous corruption in many countries, both in the developed and the developing worlds."

"Indeed liberalization and privatization have arguably been a major source of corruption; major contributors to the high level of inequality that marks many African countries and a major impediment to development and growth. Mineral rights have been sold to foreign firms in processes that have given rise to corruption and have been totally divorced from any benefits of learning, technology acquisition, or spillovers that might have emanated from the development of these resources. The fact that there have been some 'failures' in industrial policies is no more a reason for eschewing such policies than the failures in macro, monetary, and financial policies that were so evident in the run-up to the 2008 crisis are an argument against having macro, monetary, and financial policies. In the aftermath of the 2008 crisis, we have sought to learn from those failures. So, too, should we seek to learn from the failures of industrial policies. Whilst LIT policies have risks, they also have rewards."

"Perhaps in no other area did the reform programs of Africa's lost quarter century ignore the lessons of success in development, especially of East Asia, more extensively than in finance. The analysis of the extraordinary success of East Asian economies has shown the vital role played by interventions by the state in finance (…) The East Asian countries employed a variety of forms of intervention that enhanced the stability of the financial system and thereby savers' confidence in it, and that lowered transactions costs. These were highly effective in mobilizing savings (…) Ensuring access to long-term credit at moderate real rates, sometimes through development banks, promoted long-term investments that are so essential to sustainable growth. Development banks in East Asia and elsewhere have played an important role in encouraging the kind of economic transformation based on learning and the LIT policies (…) The presumption of the neo-liberal economists was that development banks, being public institutions, couldn't work (…) They ignored the successes and focused on the failures. Not surprisingly, the response of the WC reform program was not to reform development banks to improve their efficiency and efficacy but to dismantle them. As with all areas of reform and good economic management, the issue is one of learning the lessons of successes and failures."

"As Africa seeks economic transformation for sustained growth, its policymakers need to reverse the tendencies of WC reforms, which, on the one hand pay too little attention to the benefits of learning, to critical issues of pacing, sequencing, and to the development of state capacity, including the capacity to implement reforms; and on the other hand place too much faith in markets as efficient, stable, and developmentally transformative."

"In Latin America, as in Africa, the WC policies led to a dismantling of industrial policies. In recent years, the region has faced the challenge of rebuilding the capabilities for designing and implementing industrial policy—(…) the 'planning function' of the state—after their evisceration during the heyday of the Washington Consensus. As such, Latin America and Africa can learn from

each other. Among the lessons for Africa from the recent revival of industrial policies in Latin America (…) are those that relate to:

(1) The strategic management of FDI to enhance technology transfers (…);

(2) Building capabilities for learning in the management of public procurement;

(3) Setting up government programs to promote the creation of start-ups;

(4) Development banks for channeling finance to production, development, and innovation (…);

(5) New forms of partnerships with the private sector to match funds and encourage innovation and production;

(6) Channeling natural resource rents toward economic transformation (in particular through the creation of public funds for innovation and transformation);

(7) Investing in strengthening relevant state capabilities, recognizing that the sequence of first getting the institutions and then the policies 'right' does not make much sense because they co-evolve."

Noman, Akbar; Joseph E. Stiglitz; eds. (2015): *Industrial Policy and Economic Transformation in Africa*, Columbia University Press.

¿Puede/debe África seguir los ejemplos de Japón o China?

"Sino-optimism, the dominant perspective in Africa today (The Economist May 28, 2022), refers to the conviction or expectation that China is a force for good in the continent (…) Africa's leaders also see China as a model. The reasoning involved here is, first, that the socio-cultural ideologies and socio-economic conditions in China have been broadly similar to those in many African countries. What worked in China should or would also work in Africa. In other words, the 'China's model' is more relevant to the African condition than the neo-liberal model. The counter-claim is that China itself is pursuing the neo-liberal model. [Indeed, this is one of the seven contending images of China today. The other images are: China as an antiliberal alternative to the West; a rising mercantilist state; a failing market system; a looming societal meltdown; a globalist converger; a capitalist facilitator; an institutional outsourcer; a double-down state; and an obsolescing authoritarian (…)]

The second and related reason China is regarded as a model has more to do with China's continued success in modernizing its economy and lifting hundreds of millions of its people out of poverty in a relatively short period (…) Third, China is viewed as a model because the developmental policies chosen by many African governments are believed to be consistent with those pursued by China."

"The two factors which are of paramount importance in determining whether or not a country succeeds in its quest for economic modernization are internal potentialities for development and the permissiveness of the international climate. Unfortunately, these are conditions that cannot be simply replicated in Africa."

"… that Japan was able to modernize because of its culture, and not in spite of it, does not mean that there are no elements in modern Japan that are not compatible with modernity (…) Society does not have to completely wipe out traditional and unscientifc practices to use modern science.

Japanese mobilized their energy and resources to build a new, modern society when they were engaged in the modernization effort. They did not labor as much to abolish age-old practices or did not completely cut themselves off from the past. In fact, the Japanese government had consciously tried to preserve some of these very practices (…) It may be time for Africa to take this lesson to heart: The old system should not necessarily be obliterated entirely in order to build a new and modern one (…) The Japanese saw to it that if there was a culture change, it was to be only incremental, often with some sort of a link between the old and the new. Therefore, Japan's experience seems to indicate that one can be modern and traditional simultaneously, however oxymoronic such a notion may sound, and that Japan is what it is today because of its culture.

In other words, Japan's culture did not change to ft the putative requirements of modernity. Instead, modernity was made to serve the needs of Japan's culture. And when tension emerged between the two, between what is sanctioned by culture and what is required by modernity, it often became the case that culture took precedence."

"… it is bad governance that is a major stumbling block in Africa's quest for modernity. Africa needs governments that govern their societies rationally and govern themselves in the same way. This was a key factor, too, in Japan's success in economic modernization."

"Japan has been known for its ingenuity in recycling industrial products. The process of recycling politicians in Japan is also as vigorous and remarkable (…) Similarly, Japan's political history offers ample examples of the vibrancy and healthy functioning of the age and sage traditions whereby they are effectively mobilized for the good of society. And these are two areas in which Africa could simultaneously draw upon its own cultures and learn how to utilize them better. In the case of Japan, the process primarily relied upon traditions in the Japanese culture, and the outcome has been a well-preserved political environment, reduced confict, and a positively defined game of politics."

"Political conficts in Africa are multifaceted in nature, often manifesting in instability or stagnation and robbing the political process of vitality. The fundamental sources of these conficts may be traced to the interplay of internal and external forces, ranging from the legacies of colonialism to the ineptness and, in some cases, the wickedness of Africa's postcolonial leaders. Equally important are both the tools of repression these leaders obtain from abroad in the form of ideology and weapons as well as the substantial legitimacy they receive from the international state system (…) One recurring symptom of Africa's problem is nevertheless clear: the absence, or at best fragility, of peaceful political change. Not only is such dysfunctional politics an almost universal feature in much of Africa, but the mechanism by which it is produced and reproduced across time and space also shows a striking similarity. An outstanding manifestation of this is the promotion of confictual politics, a zero-sum game in which opponents are invariably demonized and prosecuted, instability is perpetuated on a wider scale, and the system's capacity for utilizing its cultural resources is steadily undermined."

"… in Africa, those who occupy the highest offce are not necessarily the more experienced or the wisest but are almost invariably the most powerful. And those who are powerful have, for the most part, a military background."

"In age too, most of Africa's leaders seem generally young while those who were old seized power when they were young. The identity and the background of these individuals, it seems, also corrupt their nature to some extent and condition them to perceive politics only as a zero-sum game. Hence, the cycle of political malaise perpetuates itself *ad infnitum* for the individual that manages to usurp political power becomes not only the head of government or head of state but also, in effect, transforms himself into the institution of the state."

"Japan's Meiji reformers proclaimed in 1868 that 'Knowledge shall be sought throughout the world' (…). In so doing, they were formulating the principle of learning from more than one source; it was a quest for stimulus from a creative diversity. The Japanese love to borrow ideas and institutions from others, and, even more crucially, they love to borrow from as many diverse sources as possible (…) Whatever the Japanese borrowed from abroad (…) they often skillfully integrated it into their own culture and made it ft their specific social needs. The blending of a foreign idea with one's own before it is put to use also lends the idea legitimacy and ensures its wider acceptance

"Meiji Japan used two avenues for absorbing Western skills. One was the enthusiastic welcome they extended to the expatriate workers, *oyatoi gaikokujin* [御雇い外國人] so that Japan could utilize their skills to lay down the infrastructure for hard modernization. In the early Meiji period, the practice was to hire annually about 300–600 such expatriate workers so that they would establish Western-style enterprises in railways, telegraphy, and silk reeling (…) Second, Japan sent its nationals, or 'expedition of practical observers' (…) to bring home the skills needed by the modernizing country. These observers included both government offcials and students."

"After the Meiji Restoration of 1868, the Japanese asked themselves: Why was Japan lagging behind the West in scientifc advancement? They identifed the culprit as the infuence of classical 'Chinese learning,' *kangaku* [漢学], which emphasized moral principles and ethics. They then asked themselves: could we modernize without Westernizing? Their answer was an emphatic yes. They turned their back on Chinese learning to a great extent, domesticated what was imported from diverse places, and idealized what was indigenous. The three principles that guided the nineteenth-century Japanese modernizers were: mass outreach, rapid impact, and fexibility. When postcolonial African leaders sought to ask themselves a similar question, soft Westernization was already in place but without hard modernization. Japan succeeded in hard modernization; Africa excelled in soft Westernization (…) In Africa, literary and verbal culture of the West (soft Westernization) has also continued to be transmitted instead of technical know-how of the West (hard modernization)."

Seifudein Adem (2023): *Africa's Quest for Modernity. Lessons from Japan and China*, Springer.

Política industrial reciente de la India

Desde hace tiempo el gobierno de la India ha aplicado medidas de política industrial para fomentar el sector manufacturero. Estas medidas no han impedido el estancamiento del sector: su proporción en el PIB en 2024 y 2014 es la misma: alrededor de un 17%. Las medidas empleadas se clasifican en tres tipos:

- incentivos ligados a la producción (por ejemplo, ayudas financieras sujetas a algún indicador, como el valor de las ventas de productos manufacturados o la escala de la producción);

- aranceles (con los que substituir importaciones con producción doméstica);
- requisitos de producción doméstica de componentes.

Los subsidios son la medida de política industrial más empleada (y una vez aplicadas, tienden a mantenerse y a ser replicadas por otros países causando una carrera global en subsidios). En cambio, en India, las medidas preferidas son las barreras comerciales.

"Of India's 1.4 billion people, approximately 565 million are part of the workforce, the majority in agriculture. The country's working-age population is expected to increase significantly, and if it is to create sufficient jobs for its youth, facilitate economic growth, and increase exports, it will need a robust, growing manufacturing sector. India has long prioritized targeted industrial policy measures to boost manufacturing. While those measures occasionally obstruct foreign firms operating in India, violate World Trade Organization (WTO) rules, and lead to trade disputes, they are also in keeping with the emerging global trade norms championed by the United States, the European Union, and China. However, some of India's measures are even more stringent than those of other countries, and those industrial policy measures have not significantly boosted India's manufacturing sector, which has remained stagnant."

"**Production-linked incentives.** The Indian government has increasingly relied on three types of industrial policy measures to boost manufacturing: production-linked incentives (PLIs), tariffs, and domestic content requirements (DCRs) (…) In March 2020, the Indian government introduced the PLI Scheme to provide financial incentives to manufacturers based on measurable outcomes—such as sales of products manufactured in India—and to offset the manufacturing cost disabilities in India. The objective of the policy is to 'boost domestic manufacturing in sunrise and strategic sectors, curb cheaper imports and reduce import bills, improve cost competitiveness of domestically manufactured goods, and enhance domestic capacity and exports' and 'create global champions in manufacturing.'"

"**Tariffs.** India's trade policy in the last decade has emphasized import substitution to increase domestic production and make the country less dependent on foreign goods. For instance, the simple average of tariff rates increased from 12 percent in fiscal year 2011 (FY 2011) to 13 percent in FY 2015 and 14.3 percent in FY 2021. The proportion of tariff lines (i.e., products that can be assigned tariffs) with a rate above 15 percent increased from 13.6 percent in 2015 to 25.4 percent in 2021 (…) Not only have average tariff rates increased, but they tend to be higher than those of other economies. The difference between India's tariff rates and those of other competing economies is even more stark for nonagricultural products."

"**Domestic Content Requirements.** India has instituted laws that impose Domestic Content Requirements (DCR)—that is, certain projects require their component parts to be manufactured domestically."

"Despite violating some established trade practices, India's adoption of industrial policies aligns with the global rise in protectionism. Not only has the number of industrial policies increased, but

their proportion of total policies has also grown. Some of India's largest trading partners have implemented significant industrial policies themselves, such as the United States' CHIPS and Science Act, Inflation Reduction Act, and Infrastructure Investment and Jobs Act; China's Made in China 2025 initiative; and the European Union's Green Deal Industrial Plan."

"Furthermore, in comparison to those industrial policies, India's incentives seem small and thinly spread. For example, India's PLI for chipmakers is one-fifth of the $53 billion in incentives that the CHIPS and Science Act offers for firms building chip factories in the United States. China's annual spending on its industrial policies is around $700 billion."

India's Tariffs Rank Highest Among Peers

Tariff rates compared with major trading partners, 2021

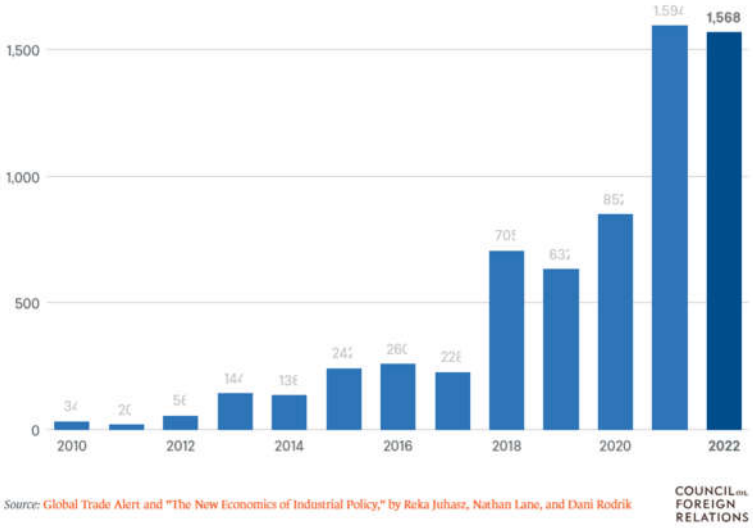
Country	All Merchandise Products Tariffs (%)	Non-Agriculture Products Tariffs (%)	Zero Tariff Lines for Non-Agriculture Products (%)
India	18.3%	14.9%	1.8%
South Korea	13.6%	6.6%	18.9%
Thailand	11.5%	7.1%	40.9%
Vietnam	9.6%	8.4%	38.6%
China	7.5%	6.5%	8.6%
Mexico	7.1%	6.0%	52.3%
Malaysia	5.6%	5.2%	65.2%
EU	5.2%	4.1%	28.6%
USA	3.4%	3.1%	50.0%

Source: WTO, ICEA - A Comparative Study of Import Tariffs in Electronics, 2023

COUNCIL on FOREIGN RELATIONS

Industrial Policy Interventions Rise Worldwide

Total number of industrial policy interventions



Source: Global Trade Alert and "The New Economics of Industrial Policy," by Reka Juhasz, Nathan Lane, and Dani Rodrik

COUNCIL on FOREIGN RELATIONS

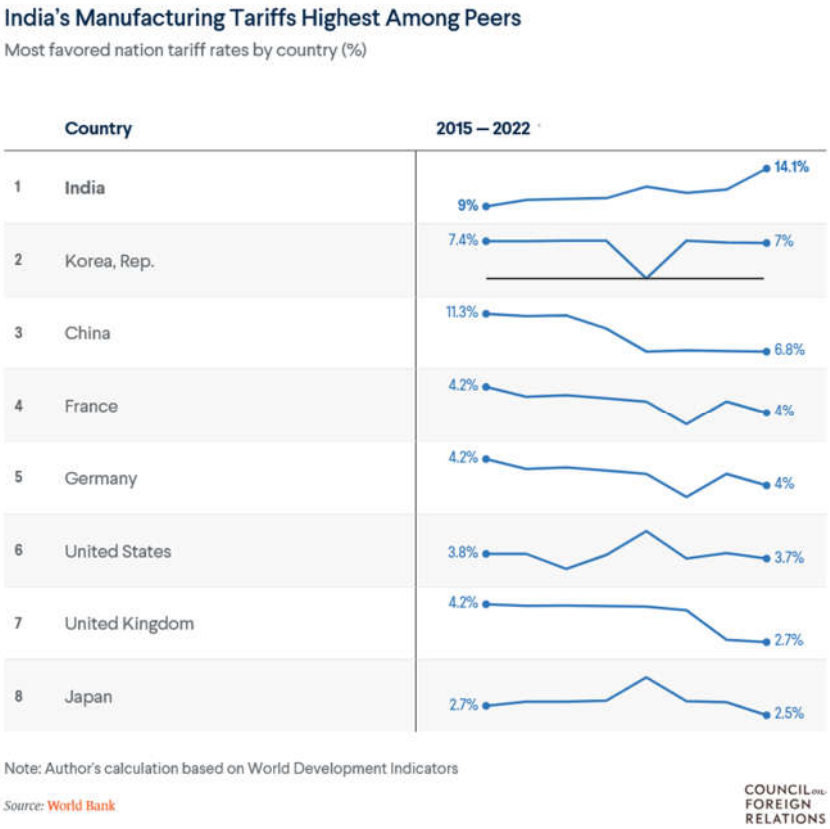
"Globally, subsidies tend to be the most preferred industrial policy intervention, accounting for more than half of all industrial policy measures worldwide in 2023. A study of subsidy awards by China, the European Union, and the United States revealed 11,861 subsidy changes and awards between 2011 and 2019, and 3,754 between 2020 and 2021 alone. Analysis of the corporate subsidies database shows that less than 1.05 percent of the subsidy policy changes involved the elimination of subsidies, termination of a subsidy scheme, or reduction in subsidy payments. Thus, once initiated, subsidies tend to remain in place. Further, when an economy adopts a set of subsidies, other economies typically adopt a similar set six months later, reflecting a tit-for-tat pattern that has led to a global subsidy race (as seen in semiconductors)."

"Furthermore, subsidies are less dominant in India than in other emerging market and developing economies. Instead, India prefers trade-related barriers. Corporate subsidies (PLIs) in India are also less transparent than elsewhere; less than 5 percent of Indian subsidies were direct transfers.

India also prioritizes tariffs, which are increasingly popular globally. In 2018, the first Donald Trump administration raised tariffs on several products, especially those from China, to 'protect domestic industries and to incentivize foreign countries to change their practices.' China, Canada,

and the European Union responded with retaliatory tariffs. The Joe Biden administration stopped increasing those tariffs in 2020, but did not reduce them. In 2024, it raised tariffs on other items such as steel, medical equipment, electric vehicles, lithium-ion batteries, and solar cells."

"One of the key objectives of an economy's industrial policy is to boost domestic manufacturing. India's manufacturing sector, however, has remained stagnant. Its share of GDP remains the same in 2024 as it was in 2014 (17.3 percent). In addition, India's exports as a share of GDP have fallen from 25.2 percent in 2014 to 22.7 percent in 2024."



"In 2010, India and Vietnam exported similar value of electronic items. In the following ten years, Vietnam's exports grew to nine times India's. Currently, India is a minor player in the global electronics trade, and India's share of high-tech exports relative to the rest of its manufacturing is a mere 12 percent compared to 23 percent, 22 percent, and 39 percent for China, Israel, and Vietnam, respectively. High import duties and localization requirements prevent Indian manufacturers from accessing cheaper intermediate inputs, preventing India's electronics sector from scaling up."

"The DCR measures have also adversely affected the solar power sector. A study of Indian solar auctions from 2014 to 2017 found that DCR increased the cost of solar power by about 6 percent per kWh generated from those projects. While there was an increase in the domestic manufacturing capacity, Indian solar panels remained 14 percent more expensive. The solar panel industry also failed to increase market share or break into export markets."

"While the smartphone PLI has helped boost the domestic production of phones from 2.14 trillion rupees to 4.1 trillion rupees between FY 2020 and FY 2024, the progress has been slow for PLI in textiles, advanced chemistry cells, solar modules, and automobiles (…) India seems to be opting for a pro-business approach over a pro-market approach."

"Though India's industrial policy measures have created friction with existing trade norms, those kinds of policies are now the global norm. In fact, India's measures remain much smaller in scale compared to other major economies."

"The demand for trade-related barriers stems from the prevalence of a large number of less-competitive firms, which are a result of a historically difficult business environment characterized by high tax rates, policy instability, limited scalability, and excessive regulations. As the benefits of protectionist measures are typically concentrated among domestic producers, compared to those of

liberalization measures that are spread thinly over a large consumer base, the political economy ensures that the demand for protectionist policies is high.

Moreover, protectionist measures are easier and quicker to implement, often requiring only executive orders. In contrast, reforms to improve the overall business environment are complex and tedious (…) In the absence of independent fiscal institutions, such as a fiscal council, public expenditure tends to be shaped by pressure group politics rather than factors such as social productivity.

Compounding those issues, liberalization is not widely perceived to be beneficial in India (…) Geopolitical factors reinforce this perception. As protectionism rises globally, spearheaded now by global leaders such as the United States, the incentives for policymakers in India to pursue liberalization reduce further.

Ironically, India also provides a cautionary tale for other countries—its industrial policies have not been able to increase its competitiveness. The manufacturing sector remains stagnant, and exports have declined. While the PLI scheme has been a mixed bag, measures such as increased tariffs and DCR have adversely impacted India's competitiveness.

India's pursuit of industrial policy appears to be a reaction to its domestic economic situation, encouraged by global trends, rather than any attempt to reshape the prevailing international order. Its industrial policies fall short of expectations for boosting India's manufacturing sector, foster economic growth, or creating more jobs.

To boost manufacturing, India needs to get its fundamentals right. This includes removing obstacles to private investments, such as high corporate taxes and uncertainty associated with the tax regime; implementing measures to attract, nurture and retain talent from within and outside the country; removing restrictive regulations, such as those on land and labor; and preventing protectionist measures like high tariffs that hinder firms from scaling up. India should also incentivize private firms to invest in research and development through measures such as tax credits."

Sarthak Pradhan (2025): "India's Industrial Policies: Rejecting the Old Status Quo and Creating the New", 11 Feb 2025

https://www.cfr.org/article/indias-industrial-policies-rejecting-old-status-quo-and-creating-new

Política industrial en India

"The spate of economic reforms that the world has seen since 1980s, in its core, had the philosophical underpinning that 'no policy' is the best industrial policy that a country can have. Hence, economic reforms only meant progressive liberalization of regulatory instruments on all fronts, including domestic market, import restrictions and regulations of foreign capital. On the part of India, the objective of developing a globally competitive manufacturing sector formed the core of the economic reforms agenda in 1991. The expectation then was that foreign direct investment (FDI) with advanced technologies assisted by competitive pressure through open and free trade would improve effciency and international competitiveness of the industrial sector. As part of the reform process, the erstwhile industrial policy framework was dismantled and progressive dilution of the FDI policy was initiated. The

entire manufacturing sector was practically opened to 100 per cent FDI by 2000, defence and strategic industries being the major exception.

However, after about one and a half decades, it became clear that the manufacturing sector was in a state of stagnation. The target year for achieving the manufacturing sector's share of 25 per cent in GDP was successively pushed, the latest being 2025. However, the recent figure of the share of manufacturing sector shows how diffcult it would be to reach the targeted share by 2025. This is in spite of the fact that the new government introduced the 'Make in India' Initiative in 2014. It is difficult to argue if Indian industrial growth or whatever success it has achieved can be attributed to liberalized policy regime alone as India still maintains, although in bits and pieces, vestiges of an active and strategic industrial policy. The 'Make in India' programme adopted by the government of India a few years back is also the proof India has not given up on industrial policy, and also a testimony to the fact that it did not have the kind of industrial policy it needed."

"Meanwhile, the world has been witnessing weakening of the 'Washington Consensus' and strong revival of industrial policy, both in theoretical discourse and in practice. This has been reflected in Indian policy initiative, as in August 2017, the government released a discussion paper with the objective of adopting a New Industrial Policy by October 2017. However, even after putting a lot of effort through multiple focus groups and consultations with stakeholders, a new policy could not be announced until now. This also indicates the issue of industrial policy in India is far from being settled. In any case, even announcement of the new policy need not be an end in itself. The policy needs to be dynamic and flexible, requiring adjustments, as it would move with time. It is an imperative to better understand India's long struggle to develop the manufacturing sector."

"In a developing country context, industrialization is often considered to be synonymous with economic development. Immediately after Independence, India adopted the Industrial Policy Resolution, 1948, which created a mixed economy, reserving spheres for the private and public sectors. About four decades later, when India embarked on an economic reforms programme in 1991, the major instrument was the Industrial Policy Statement of July 24, 1991. The orientation of this policy was diametrically opposite to the 1948 one, though both of them intended to speed up the process of industrialization in India. Industrial policy is the strategic effort made by a country's government to promote industrialization, particularly the development of the manufacturing sector. Unlike the broader economy-wide macroeconomic policies, industrial policies are often sector specifc. Often, they are partly both – macroeconomic or horizontal, and sector-specifc or selective (also called vertical)."

"While even mainstream economists accept the need for interventions that are intended to regulate networks and public infrastructure, or for correcting information asymmetries and promoting R&D, the debate is about whether government interventions should go beyond them. Historically, however, it is difficult to find an example where industrialization has taken place in a perfectly *laissez-faire* environment and without any state intervention beyond a level that the mainstream economists are willing to concede, be it the case of US industrialization or more recent examples of industrialization of East Asian countries or some success stories in some Latin American countries."

"Even in a developed economy, it is rare to fnd an economic policy that does not embrace an industrial policy aspect to maintain its industrial dynamism (…) In any case, industrial policy is a tool for effective coordination of the activities of various sectors of the economy, and so, quite important for successful industrialization."

"… while the 1948 industrial policy of India put emphasis on the role of the public sector, the 1991 industrial policy put emphasis on the role of foreign capital and technology to drive the industrialization process. The real industrial policy in the post-Independence era, however, came with the 1956 Industrial Policy Resolution, which, along with the role of the public sector, put emphasis on heavy industry to create the industrial base in the country."

"When it comes to industrialization and industrial performance in India, it is now well accepted that India had only limited success. It could not match the performance of the East Asian countries, and at the same time, it did not go the African way (…) While India maintained its growth momentum for a long time, even after its policy shift in 1991, an inconvenient truth is that its success in getting ahead in terms of growth in manufacturing remains elusive. India's share of manufacturing increased steadily during 1950–1980, and it continued to rise slowly until the mid-1990s, but it became stagnant thereafter and even experienced a decline since 2008."

"The question arises whether this limited success was due to any conscious strategies and policies adopted in India, or if it was just due to market forces (…) Some key questions that can be raised in this context are: did India follow a planned economy model or a coordinated market economy model?"

"**India and China: diverging industrial policy and performance**

(…) According to World Bank estimates, in 1987, India's GDP (in US$) was slightly higher than that of China, and since China had a higher population, India's per capita GDP was substantially higher than that of China, which was maintained until 1990. By 2018, China's GDP as well as per capita GDP both become almost five times those of India. However, the structure of the Chinese GDP contained its seeds for higher growth rates for the future. In 1990, the share of agriculture in China was 26.8 per cent as against 30.7 per cent in India. The share of industry in China was 41.2 per cent as against 32.2 per cent in India, while the shares of service sector were 32.2 per cent and 47.2 per cent, respectively (…) Since agriculture has a tendency to post a lower growth rate, India was at a disadvantage with a higher share of agriculture. India also had a much higher share of services (…) With higher service sectors, it was quite diffcult to embark on an export-led growth path, which China, with a much higher industrial sector, could take advantage of.

The higher share of industrial sector was also because of its massive push for construction of infrastructure, wherein it was building railways, roads, ports, power plants, etc. But in 1991, India thought it was better to give such responsibility to the private players. While the government in India almost stopped investing in such activities, the private sector was not yet ready, due to inherent risks, an absence of proper fnancing mechanism, and the regulatory environment. Private investment was too little and too late. When the government realized it, it was too late. Finally, the government decided to make an investment in infrastructure, but a decade was lost, and the country was struggling with poor infrastructure (…) So China built huge railway networks and new roads;

in India there was hardly any addition to the existing railway network, and construction of roads started picking up after a gap of a decade (…) Similarly, construction of power plants picked up only around 2010 – but the price of electricity, especially for industrial use, remains much higher in India compared to China."

"India is not only dependent on imports for much of its oil supply, but government (both at the centre and in the states) treated it as a major source of revenue. In China, the finance and banking system is heavily controlled by the government, and most important banks are under government ownership. More importantly, China has been able to ensure credit facilities for its bourgeoning industry at low interest rates. Not just real interest rates were low, but even interest spreads were quite low in China. In India, even though the government still owns major banks, the interest rates are higher, and so are the interest spreads, and as a result, interest on deposit is also quite low. This often influences people to invest their savings on unproductive assets like gold and land rather than putting their money in the banks that industry could access."

"What also made China's job easier is the adult literacy level as well as the mean years of schooling, which are much higher than those in India. Sen (2015) argued that much of the difference in development achievements between India and China can be explained by the difference in educational achievements. Even with a large number of private firms and foreign companies and a much reduced role of public sector enterprises, China has retained a major role for the National Development and Reform Commission (NDRC) – the government planning agency that formulate strategies for industrialization, and it played a major role in China emerging as the leader in solar photovoltaic manufactures, even though the actual production is being led by private companies."

"Despite the rhetoric of India being among the fastest growing and the major emerging economies of the world, the fact remains that the economic foundations of its industrial sector remain quite weak. Hence, it would be quite impossible for the Indian industry to show superior performance purely on the basis of market-driven growth strategies."

"One important issue that might have impacted industrialization in India, especially in the post-1991 period, is the narrative of service-led growth, as there is now evidence that such a growth strategy can have serious limitations."

Nanda, Nitya (2022): ***India's Industrial Policy and Performance. Growth, Competition and Competitiveness,*** **Routledge.**

Industrialización y 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.

2.1 Política industrial en el Reino Unido y los EEUU

Política industrial británica en la 1ª Revolución 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/

¿Por qué fue británica la 1ª Revolución 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.

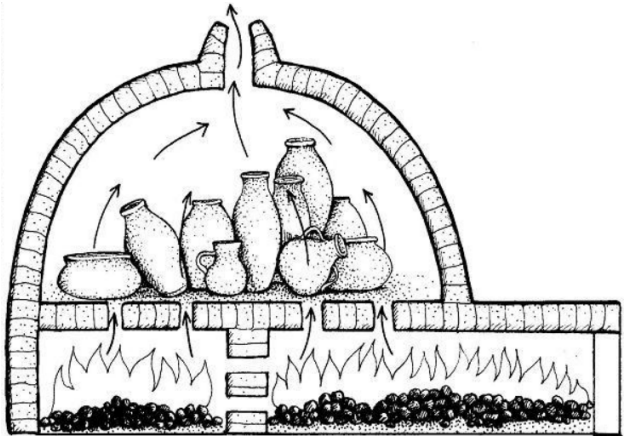
This was a two step process. In the late sixteenth and early seventeenth centuries a European-wide market emerged. England took a commanding position in this new order as her wool textile industry out competed the established producers in Italy and the Low Countries. England extended her lead in the 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."

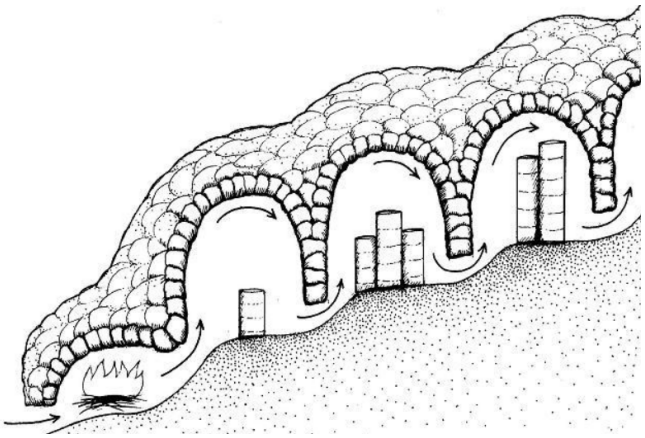
"Success in international trade created Britain's high wage, cheap energy economy, and it was the spring board for the Industrial Revolution. High wages and cheap energy created a demand for technology that substituted capital and energy for labour."

"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

Política industrial de l'Administració Biden (2021-2025)

"A new breed of industrial policy is taking hold in the United States. Under President Joe Biden's leadership, the federal government has created major new programs through the Infrastructure Investment and Jobs Act ($550 billion), the CHIPS and Science Act ($280 billion), and the Inflation Reduction Act ($394 billion). These are not traditional spending measures to stimulate demand. Rather, as Secretary of the Treasury Janet Yellen explains, they are supply-side investments to boost US economic capacity, both overall and in key sectors such as semiconductors and renewable energy (…) While the individual provisions and funding processes differ, all three programmes are based on the public-private model that has been critical to US competitiveness over the past century. They are designed to crowd-in and accelerate private investment, not substitute for it (…)

The programmes also will encourage more supportive regulatory changes, for example, in the permitting and siting of green-energy projects, by state and local governments, which are responsible for the bulk of economic development in the US. And they share various features that have come to define a new "sustainable and equitable" approach to industrial policy (…)

All three bills include place-based programmes designed to promote inclusive growth, and these have elicited complementary efforts at the state and local level (…)

Finally, a healthy, skilled workforce is the most important factor in attracting and retaining employers and businesses in key sectors. Hence, many states, cities and regions have been increasing their investments in workforce development to ensure that their residents have the right skills to benefit from new job opportunities in infrastructure, semiconductors, and climate-related industries (…)

The Biden administration's three big industrial policy programs all recognise the importance of human capital in building supply capacity, and each provides some support for skills development, primarily through tax credits to employers (…)

By design, the new regional economic-development efforts are cross-sectoral and cross-governmental, from the state and local level to the federal level (…)

Industrial policy is central to Biden's economic agenda. Getting an industrial policy right is never easy, and getting a place-based one right will prove even more challenging. But doing so is now essential to achieving more equitable and sustainable growth."

Tyson, Laura; Lenny Mendonca (2023): "America's new era of industrial policy"
https://jordantimes.com/opinion/project-syndicate/americas-new-era-industrial-policy

"A fundamental component of both Bidenomics and California's economic strategy is robust world-class research to support innovation in global growth sectors. It is these sectors that will drive productivity growth, create good jobs and fuel US exports and wealth creation now and in the future."

Tyson, Laura; Lenny Mendonca (2021): "From California capitalism to Bidenomics"
https://www.socialeurope.eu/from-california-capitalism-to-bidenomics

¿Ciclos de política industrial en EEUU?

"President Reagan had a unique political talent for explaining complex matters of policy and strategy in simple terms. In 1986, he summed up the state of the U.S. economy under the Carter administration: 'Back then, the government's view of the economy could be summed up in a few short phrases; if it moves, tax it. If it keeps moving, regulate it. And if it stops moving, subsidize it.'

Over eight years, the Reagan administration successfully rolled back excessive government interventions of the Kennedy, Johnson, Nixon, and Carter administrations, unleashing the productive capacity of the U.S. economy. This consensus mostly held through the George H.W. Bush, Clinton, and George W. Bush administrations. But the Obama administration featured a

return to heavy government intervention in the private sector, particularly through its turbocharged expansion of the regulatory state, delivering an economic constipation similar to that which plagued the U.S. before the Reagan revolution. The Trump administration's pursuit of tax reform, deregulation, and fair trade produced noninflationary growth that generated the fastest increases in real wages in a generation.

Yet the Biden administration actively chose to disregard the roadmap for economic dynamism that Presidents Reagan and Trump left behind. Instead, the Biden administration reached back for the Carter model. 'Bidenomics,' or under Treasury Secretary Janet Yellen's more nomenclative framing of 'modern supply side economics,' is neither modern nor supply side nor economical. At its core, Bidenomics represents a return to the discredited economic philosophy of central planning.

President Biden's economic team hoped (…) that the Bidenomics experiment would result in a 'new equilibrium of higher productivity, higher wage growth, [and] higher GDP growth as a result of this set of policy interventions.' But like all prior attempts at central planning, it failed to deliver prosperity, and instead generated a substantial upward price-level shock, accompanied by an insidiously persistent inflationary environment that has eroded standards of living in the United States. Continual economic anxiety has replaced abundance and prosperity."

Bessent, Scott K.H. (2024): "The Fallacy of Bidenomics: A Return to Central Planning"
https://manhattan.institute/article/the-fallacy-of-bidenomics-a-return-to-central-planning

Informe sobre manufacturas de Hamilton, 1791

"A key question is why the practice of industrial policy differs so much across countries: why do some economic policies succeed and others fail? (…) The expediency of encouraging manufactures in the United States, which was not long since deemed very questionable, appears at this time to be pretty generally admitted."

"It is a primary object of the policy of nations, to be able to supply themselves with subsistence from their own soils; and manufacturing nations, as far as circumstances permit, endeavor to procure, from the same source, the raw materials necessary for their own fabrics (…) But it is also a consequence of the policy … that the foreign demand for the products of Agricultural Countries, is, in a great degree, rather casual and occasional, than certain or constant (…) Independently likewise of the artificial impediments, which are created by the policy in question, there are natural causes tending to render the external demand for the surplus of Agricultural nations a precarious reliance."

"To secure such a market, there is no other expedient, than to promote manufacturing establishments. Manufacturers who constitute the most numerous class, after the Cultivators of land, are for that reason the principal consumers of the surplus of their labour. It merits particular observation, that the multiplication of manufactories not only furnishes a Market for those articles, which have been accustomed to be produced in abundance, in a country; but it likewise creates a demand for such as were either unknown or produced in inconsiderable quantities. The bowels as well as the surface of the earth are ransacked for articles which were before neglected. Animals, Plants and Minerals acquire an utility and value, which were before unexplored."

"The foregoing considerations seem sufficient to establish, as general propositions, That it is the interest of nations to diversify the industrious pursuits of the individuals, who compose them— That the establishment of manufactures is calculated not only to increase the general stock of useful and productive labour; but even to improve the state of Agriculture in particular; certainly to advance the interests of those who are engaged in it."

"… the United States cannot exchange with Europe on equal terms; and the want of reciprocity would render them the victim of a system, which should induce them to confine their views to Agriculture and refrain from Manufactures. A constant and encreasing necessity, on their part, for the commodities of Europe, and only a partial and occasional demand for their own, in return, could not but expose them to a state of impoverishment, compared with the opulence to which their political and natural advantages authorise them to aspire."

"The objections to the pursuit of manufactures in the United States, which next present themselves to discussion, represent an impracticability of success, arising from three causes—scarcity of hands—dearness of labour—want of capital (…) There remains to be noticed an objection to the encouragement of manufactures, of a nature different from those which question the probability of success. This is derived from its supposed tendency to give a monopoly of advantages to particula⟨r⟩ classes at the expence of the rest of the community, who, it is affirmed, would be able to procure the requisite supplies of manufactured articles on better terms from foreigners, than from our own Citizens, and who it is alledged, are reduced to a necessity of paying an enhanced price for whatever they want, by every measure, which obstructs the free competition of foreign commoditi⟨es.⟩"

"But though it were true, that the immedi⟨ate⟩ and certain effect of regulations controuling the competition of foreign with domestic fabrics was an increase of price, it is universally true, that the contrary is the ultimate effect with every successful manufacture. When a domestic manufacture has attained to perfection, and has engaged in the prosecution of it a competent number of Persons, it invariably becomes cheaper … The internal competition, which takes place, soon does away every thing like Monopoly, and by degrees reduces the price of the Article to the minimum of a reasonable profit on the Capital employed … It is the interest of a community with a view to eventual and permanent oeconomy, to encourage the growth of manufactures. In a national view, a temporary enhancement of price must always be well compensated by a permanent reduction of it."

"… two important inferences are to be drawn, one, that there is always a higher probability of a favorable balance of Trade, in regard to countries in which manufactures founded on the basis of a thriving Agriculture flourish, than in regard to those, which are confined wholly or almost wholly to Agriculture; the other (which is also a consequence of the first) that countries of the former description are likely to possess more pecuniary wealth, or money, than those of the latter. Facts appear to correspond with this conclusion."

"In order to a better judgment of the Means proper to be resorted to by the United states, it will be of use to Advert to those which have been employed with success in other Countries. The principal of these are.

I Protecting duties—or duties on those foreign articles which are the rivals of the domestic ones, intended to be encouraged (…)

II Prohibitions of rival articles or duties equivalent to prohibitions.

This is another and an efficacious mean of encouraging national manufactures, but in general it is only fit to be employed when a manufacture, has made such a progress and is in so many hands as to insure a due competition, and an adequate supply on reasonable terms (…)

III Prohibitions of the exportation of the materials of manufactures (…)

IV Pecuniary bounties

This has been found one of the most efficacious means of encouraging manufactures, and it is in some views, the best."

"There is a degree of prejudice against bounties from an appearance of giving away the public money, without an immediate consideration, and from a supposition, that they serve to enrich particular classes, at the expence of the Community.

But neither of these sources of dislike will bear a serious examination. There is no purpose, to which public money can be more beneficially applied, than to the acquisition of a new and useful branch of industry; no Consideration more valuable than a permanent addition to the general stock of productive labour.

As to the second source of objection, it equally lies against other modes of encouragement, which are admitted to be eligible. As often as a duty upon a foreign article makes an addition to its price, it causes an extra expence to the Community, for the benefit of the domestic manufacturer. A bounty does no more: But it is the Interest of the society in each case, to submit to a temporary expence, which is more than compensated, by an increase of industry and Wealth, by an augmentation of resources and independence; & by the circumstance of eventual cheapness, which has been noticed in another place (…)

V Premiums

These are of a Nature allied to bounties, though distinguishable from them, in some important features. Bounties are applicable to the whole quantity of an article produced, or manufactured, or exported, and involve a correspondent expence. Premiums serve to reward some particular excellence or superiority, some extraordinary exertion or skill, and are dispensed on⟨ly⟩ in a small number of cases. But their effect is to stimulate gener⟨al⟩ effort (…)

VI The Exemption of the Materials of manufactures from duty (…)

VIII The encouragement of new inventions and discoveries, at home, and of the introduction into the United States of such as may have been made in other countries; particularly those, which relate to machinery.

This is among the most useful and unexceptionable of the aids, which can be given to manufactures. The usual means of that encouragement are pecuniary rewards, and, for a time, exclusive privileges (…)

IX Judicious regulations for the inspection of manufactured commodities.

This is not among the least important of the means, by which the prosperity of manufactures may

be promoted. It is indeed in many cases one of the most essential. Contributing to prevent frauds upon consumers at home and exporters to foreign countries—to improve the quality & preserve the character of the national manufactures, it cannot fail to aid the expeditious and advantageous Sale of them, and to serve as a guard against successful competition from other quarters (…)

XI The facilitating of the transportation of commodities."

"In countries where there is great private wealth much may be effected by the voluntary contributions of patriotic individuals, but in a community situated like that of the United States, the public purse must supply the deficiency of private resource."

Alexander Hamilton's Final Version of the Report on the Subject of Manufactures, 05 Dec 1791
https://founders.archives.gov/documents/Hamilton/01-10-02-0001-0007

Protección de la industria inmadura, List, 1841

"It is not true that population increases in a larger proportion than production of the means of subsistence; it is at least foolish to assume such disproportion, or to attempt to prove it by artificial calculations or sophistical arguments, so long as on the globe a mass of natural forces still lies inert by means of which ten times or perhaps a hundred times more people than are now living can be sustained. It is mere narrow-mindedness to consider the present extent of the productive forces as the test of how many persons could be supported on a given area of land. The savage, the hunter, and the fisherman, according to his own calculation, would not find room enough for one million persons, the shepherd not for ten millions, the raw agriculturist not for one hundred millions on the whole globe; and yet two hundred millions are living at present in Europe alone."

"The causes of wealth are something totally different from wealth itself. A person may possess wealth, i.e. exchangeable value; if, however, he does not possess the power of producing objects of more value than he consumes, he will become poorer. A person may be poor; if he, however, possesses the power of producing a larger amount of valuable articles than he consumes, he becomes rich. The power of producing wealth is therefore infinitely more important than wealth itself; it insures not only the possession and the increase of what has been gained, but also the replacement of what has been lost. This is still more the case with entire nations (who cannot live out of mere rentals) than with private individuals."

"In order to allow freedom of trade to operate naturally, the less advanced nations must first be raised by artificial measures to that stage of cultivation to which the English nation has been artificially elevated. In order that … those nations which feel themselves to be capable … of developing a manufacturing power of their own must adopt the system of protection as the most effectual means for this purpose. The effects of this system for the purpose in view are of two kinds: in the first place, by gradually excluding foreign manufactured articles from our markets, a surplus would be occasioned in foreign nations, of workmen, talents, and capital, which must seek employment abroad; and secondly by the premium which our system of protection would offer to the immigration into our country of workmen, talents, and capital, that excess of productive power would be induced to find employment with us, instead of emigrating to distant parts of the world and to colonies."

"Manufactories and manufactures are the mothers and children of municipal liberty, of intelligence, of the arts and sciences, of internal and external commerce, of navigation and improvements in transport, of civilisation and political power. They are the chief means of liberating agriculture from its chains, and of elevating it to a commercial character and to a degree of art and science, by which the rents, farming profits, and wages are increased, and greater value is given to landed property. The popular school has attributed this civilising power to foreign trade, but in that it has confounded the mere exchanger with the originator. Foreign manufactures furnish the goods for the foreign trade, which the latter conveys to us, and which occasion consumption of products and raw materials which we give in exchange for the goods in lieu of money payments.

If, however, trade in the manufactures of far distant lands exercises admittedly so beneficial an influence on our agricultural industry, how much more beneficial must the influence be of those manufactures which are bound up with us locally, commercially, and politically, which not only take from us a small portion, but the largest portion of their requirements of food and of raw materials, which are not made dearer to us by great costs of transport, our trade in which cannot be interrupted by the chance of foreign manufacturing nations learning to supply their own wants themselves, or by wars and prohibitory import duties?"

"The great statesmen of all modern nations, almost without exception, have comprehended the great influence of manufactures and manufactories on the wealth, civilisation, and power of nations, and the necessity of protecting them. Edward III comprehended this like Elizabeth; Frederick the Great like Joseph II; Washington like Napoleon."

"… the system of protection can be justified solely and only for the purpose of the industrial development of the nation. It may then, by thus basing the system of protection as regards manufactures on correct principles, induce nations which at present adopt a rigidly prohibitive system, as e.g. the French, to give up the prohibitive system by degrees."

List, Friedrich (1991 [1841]): *The national system of political economy*, Augustus M. Kelley.
https://web.archive.org/web/20090801134149/http://socserv2.socsci.mcmaster.ca/~econ/ugcm/3ll3/list/list2

El auge de Inglaterra por la política industrial

"In all ages there have been cities or countries which have been pre-eminent above all others in industry, commerce, and navigation; but a supremacy such as that which exists in our days, the world has never before witnessed."

"… England. She has become an example and a pattern to all nations -- in internal and in foreign policy, as well as in great inventions and enterprises of every kind; in perfecting industrial processes and means of transport, as well as in the discovery and bringing into cultivation uncultivated lands, especially in the acquisition of the natural riches of tropical countries, and in the civilisation of barbarous races or of such as have retrograded into barbarism (…) Let us then congratulate ourselves on the immense progress of that nation, and wish her prosperity for all future time. But ought we on that account also to wish that she may erect a universal dominion on the ruins of the other nationalities?

"… the culture and civilisation of the human race can only be brought about by placing many

nations in similar positions of civilisation, wealth, and power; that just as England herself has raised herself from a condition of barbarism to her present high position, so the same path lies open for other nations to follow … Let us now state summarily the maxims of State policy by means of which England has attained her present greatness. They may be briefly stated thus:

- Always to favour the importation of productive power, in preference to the importation of goods.
- Carefully to cherish and to protect the development of the productive power.
- To import only raw materials and agricultural products, and to export nothing but manufactured goods.
- To direct any surplus of productive power to colonisation, and to the subjection of barbarous nations.
- To reserve exclusively to the mother country the supply of the colonies and subject countries with manufactured goods, but in return to receive on preferential terms their raw materials and especially their colonial produce.
- To devote especial care to the coast navigation; to the trade. Between the mother country and the colonies; to encourage seafisheries by means of bounties; and to take as active a part as possible in international navigation.
- By these means to found a naval supremacy, and by means of it to extend foreign commerce, and continually to increase her colonial possessions.
- To grant freedom in trade with the colonies and in navigation only so far as she can gain more by it than she loses.
- To grant reciprocal navigation privileges only if the advantage is on the side of England, or if foreign nations can by that means be restrained from introducing restrictions on navigation in their own favour.
- To grant concessions to foreign independent nations in respect of the import of agricultural products, only in case concessions in respect of her own manufactured products can be gained thereby.
- In cases where such concessions cannot be obtained by treaty, to attain the object of them by means of contraband trade.
- To make wars and to contract alliances with exclusive regard to her manufacturing, commercial, maritime, and colonial interests. To gain by these alike from friends and foes: from the latter by interrupting their commerce at sea; from the former by ruining their manufactures through subsidies which are paid in the shape of English manufactured goods.

These maxims were in former times plainly professed by all English ministers and parliamentary speakers."

"In Adam Smith's time, a new maxim was for the first time added to those which we have above stated, namely, to conceal the true policy of England under the cosmopolitical expressions and arguments which Adam Smith had discovered, in order to induce foreign nations not to imitate that policy.

It is a very common clever device that when anyone has attained the summit of greatness, he kicks away the ladder by which he has climbed up, in order to deprive others of the means of climbing

up after him. In this lies the secret of the cosmopolitical doctrine of Adam Smith … Any nation which by means of protective duties and restrictions on navigation has raised her manufacturing power and her navigation to such a degree of development that no other nation can sustain free competition with her, can do nothing wiser than to throw away these ladders of her greatness, to preach to other nations the benefits of free trade, and to declare in penitent tones that she has hitherto wandered in the paths of error, and has now for the first time succeeded in discovering the truth."

https://web.archive.org/web/20090801134200/http://socserv2.socsci.mcmaster.ca/~econ/ugcm/3ll3/list/list4

2.2 Política industrial en la Europa continental

El plan Marshall (1948-1952)

"In the immediate post-World War II period, Europe remained ravaged by war and thus susceptible to exploitation by an internal and external Communist threat. In a June 5, 1947, speech to the graduating class at Harvard University, Secretary of State George C. Marshall issued a call for a comprehensive program to rebuild Europe. Fanned by the fear of Communist expansion and the rapid deterioration of European economies in the winter of 1946–1947, Congress passed the Economic Cooperation Act in March 1948 and approved funding that would eventually rise to over $12 billion for the rebuilding of Western Europe.

The Marshall Plan generated a resurgence of European industrialization and brought extensive investment into the region. It was also a stimulant to the U.S. economy by establishing markets for American goods … The Marshall Plan was applied solely to Western Europe, precluding any measure of Soviet Bloc cooperation … The Marshall Plan has been recognized as a great humanitarian effort. Secretary of State Marshall became the only general ever to receive a Nobel Prize for peace. The Marshall Plan also institutionalized and legitimized the concept of U.S. foreign aid programs, which have become a integral part of U.S. foreign policy."

https://history.state.gov/milestones/1945-1952/marshall-plan

Dilema de política de competencia de la UE

"In the study of European Union (EU) competition policy, there has been a growing interest in a potential tension between two key policy goals (…). On the one hand, the EU enforces its competition law to promote market competition within the European single market. In other words, the first goal is to create a level-playing field in which firms operate freely and compete across the borders between EU member states. On the other hand, the EU aims to ensure that market competition promoted by the law enhances the international competitiveness of firms based in EU member states (hereinafter 'EU firms') in comparison with non-EU firms. In this context, competition in the European single market is considered a springboard that encourages innovation and prepares EU firms to compete in the global market.

The European Commission, which plays a central role in this policy domain, has stated numerous times that these goals—competition and competitiveness—can be achieved simultaneously. For example, in its 2013 annual report on competition policy, the European Commission (2014: 2) claimed that '[c]ompetition policy fosters competitiveness in the global context. Healthy competition in the Single Market prepares European companies to do business on global markets and succeed'. However, one should not assume that more competition always leads to stronger competitiveness. The international competitiveness of EU firms would be undermined when the level of European competition regulation is higher than that of its major trading partners (…). If that is the case, the EU must make a difficult choice between promoting competition for regional economic integration and enhancing the competitiveness of EU firms in relation to their rivals in

third countries. In a nutshell, the EU is currently facing what I term a competition–competitiveness dilemma."

"In this book, 'competition policy' refers to a prohibitive public policy that regulates anticompetitive economic activities primarily based on legal measures rather than administrative ones. This policy is in sharp contrast with 'industrial policy', which typically involves a relatively large amount of public expenditure and the extensive use of non-binding measures such as administrative guidance. Competition policies usually cover various areas of regulation such as cartels, abuse of a dominant position, and mergers, whereas state aid control may also be the competence of supranational competition authorities such as those of the EU."

"It will be argued that EU competition authorities take the goal of industrial competitiveness seriously, but it does not take precedence over the goal of creating a level-playing field in the European single market. This finding indicates that the EU, especially the European Commission, sees competition policies through the lens of the single market despite the emphasis on international competitiveness in the EU's various official documents."

"… 'stringent competition policy' (…) focuses on the correction of market failures, such as cartels and monopolies, and prioritises the creation and maintenance of a level-playing field in the market. It is also comparatively strict, indifferent to the nationality of firms."

"… the concept of stringent competition policy proposed here significantly differs from 'strategic competition policy'. A legal scholar, Roth (2006: 39), defines the latter as 'a policy that goes beyond merely shaping a favourable environment for competition by fostering an attractive infrastructure (in all its dimensions) and sustaining innovation and technological innovation, and conceives and uses competition law as an instrument to assist European competitors on world markets'. This type of policy prioritises domestic firms' international competitiveness over the goal of promoting competition itself. In other words, the state plays the role of a welfare-maximiser, instrumentally uses competition rules for industrial policy purposes, and aims to foster export-oriented national champions in key sectors."

TABLE 1.1 A comparison of stringent and strategic competition policies

	Stringent competition policy	*Strategic competition policy*
Policy style	• Comparatively strict enforcement • Non-discrimination against foreign firms • Less sensitive to prevailing politics and macroeconomic conditions	• Comparatively lenient enforcement • Tendency to foster national/regional champions in key sectors • More sensitive to prevailing politics and macroeconomic conditions
Policy goals	• Maintaining market competition while correcting market failures	• Promoting the international competitiveness of firms based in its own territory
Exemption from law	• Covering only a limited number of areas	• Covering numerous areas
Role of the regulator	• An independent regulator	• An economic welfare maximiser

Yoshizawa, Hikaru (2022): *European Union Competition Policy Versus Industrial Competitiveness. Stringent Regulation and Its External Implications*, Routledge.

¿Por qué Europa está perdiendo la carrera tecnológica?

"The United States is the world's dominant financial and technological power. China is the global manufacturing hegemon. What is Europe's economic leverage? That question lies at the core of a recent report by former European Central Bank President Mario Draghi. In a nutshell, Draghi argues that the European Union is facing huge economic challenges that could soon make the bloc irrelevant on the global economic scene … The EU needs to overhaul its economic model—starting with the way it approaches the financing of innovation—if it wants to avoid being squeezed between the United States and China."

"The causes of Europe's economic woes are structural. Demographics and productivity growth determine long-term economic prospects, and the EU is not doing well on either metric … The EU's workforce could shrink by around 2 million workers each year by 2040 … Things do not look better for productivity, which has grown at a modest 0.7 percent per year on average since 2015—less than half the U.S. rate and a mere one-ninth of China's reported figure … In 1995, U.S. and EU productivity was broadly similar. Today, Europe's productivity is about 20 percent below America's."

"The long list of culprits includes low labor mobility, overwhelming red tape, and flaws in the education system. Low EU expenses on research and development, however, stand out as one of the main drivers of the growing productivity gap between the U.S. and EU economies. The data is striking: At $886 billion, or 3.4 percent of GDP, in 2022, U.S. R&D expenses were more than twice as high as the EU's, at $382 billion, or 2.3 percent of GDP. China is not far behind … On this measure, the United States and China are giving themselves the means to succeed in the global transition toward high-tech, digitalized economies. Meanwhile, the EU is lagging far behind."

"… the Draghi report calls for a financial electroshock to boost R&D spending. His team of economists reckons that the EU needs to spend an extra 750 billion to 800 billion euros per year to close the gap with the United States … It would represent around 5 percent of EU GDP each year—a massive amount by any standard. This is precisely why it is unlikely to happen."

"The private sector alone would not be able to shoulder such eye-popping costs. In turn, the fate of Draghi's calls for an investment push will hinge on Europe's ability to massively boost public spending on R&D. In theory, this scale of funding could be done through joint EU borrowing, which was first used in 2020, when EU member states gave the European Commission the green light to issue up to 750 billion euros in bonds to finance the post-COVID economic recovery. Yet … shortly after the release of the Draghi report, German Finance Minister Christian Lindner declared that 'joint borrowing will not solve the EU's structural problems' … This situation calls for a bold remedy: EU member states should identify a handful of critical sectors and jointly go big in these fields."

"… the EU should create an EU-level structure to identify and fund priority sectors, essentially transferring to EU institutions the responsibility to spell out which sectors should receive public R&D money … Frontier technologies such as artificial intelligence and quantum computing would be obvious sectors for the EU to go all in … More than 80 percent of global AI funding goes to U.S. or Chinese firms compared with just 7 percent to EU businesses. The gap is similarly striking for

quantum computing. Seven of the top 10 global firms in the field are U.S.-based. Two are Chinese, and one is Japanese; none is European."

"The emergence of EU tech champions would come with an added benefit: It would lift Europe's place on the radar of global venture capital funds. Since 2013, about five times more venture capital has gone into U.S. start-ups than European ones. The lack of such funding in Europe comes with dramatic consequences for EU startups: Of the 147 unicorns (start-ups whose value stands above $1 billion) that have emerged in the EU since 2008, about one-third eventually relocated abroad, mostly to the United States, often because they could not find sufficient financing in Europe."

"There is little chance that EU policymakers will answer Draghi's calls for a massive investment boost … Europe will struggle to finance its generous social model without sustained economic growth. Tackling Europe's productivity gap should be at the top of the to-do list of the new European Commission."

Demarais, Agathe (2024): "Why Europe is losing the tech race and what the European Union could do to catch up"

https://foreignpolicy.com/2024/09/26/europe-technology-eu-commission-venture-capital-research-development/
https://www.almendron.com/tribuna/why-europe-is-losing-the-tech-race/

¿Por qué Europa está perdiendo la carrera en innovación?

"The European Union (EU) continues to lose ground in the global race for promising technologies. When it comes to research and development expenditure in growth sectors such as biotechnology or the digital economy, the USA is far ahead. The Chinese have also risen to become a global power factor in some future technologies in just ten years. In Europe … innovation is concentrated in the automotive industry and similar medium-technology sectors, while the high-growth, high-tech industries are barely involved. 'The continent is in a mid-tech trap'… Today, the EU is neither represented in the group of the top 20 tech companies nor in the top 20 start-ups. 'The EU is losing the race for innovation' … This would not only mean giving up economic prosperity, but also geopolitical influence … The EU not only invests less than the USA in research and development overall. In Europe, the focus of innovation is also on achieving minor product improvements in old industries such as the automotive sector … This generates far less growth than groundbreaking innovations … One reason for the EU's lack of innovation is low research spending."

"The USA should serve as a role model. In the United States, public research funds are primarily used to promote ground-breaking innovations. Government agencies concentrate on the early stages of development. Hundreds of excellently trained scientists are involved in the process of selecting potentially promising projects from a wide range of fields for funding. In contrast, the European Innovation Council (EIC), which is based at the EU Commission, is dominated by civil servants … The application and selection process for companies interested in funding is also bureaucratic and the regulations are too rigid … A large proportion of the funding granted is concentrated on small and medium-sized companies."

"To escape the 'mid-tech trap', what is needed is not more state funding, but less political control and more scientific expertise."

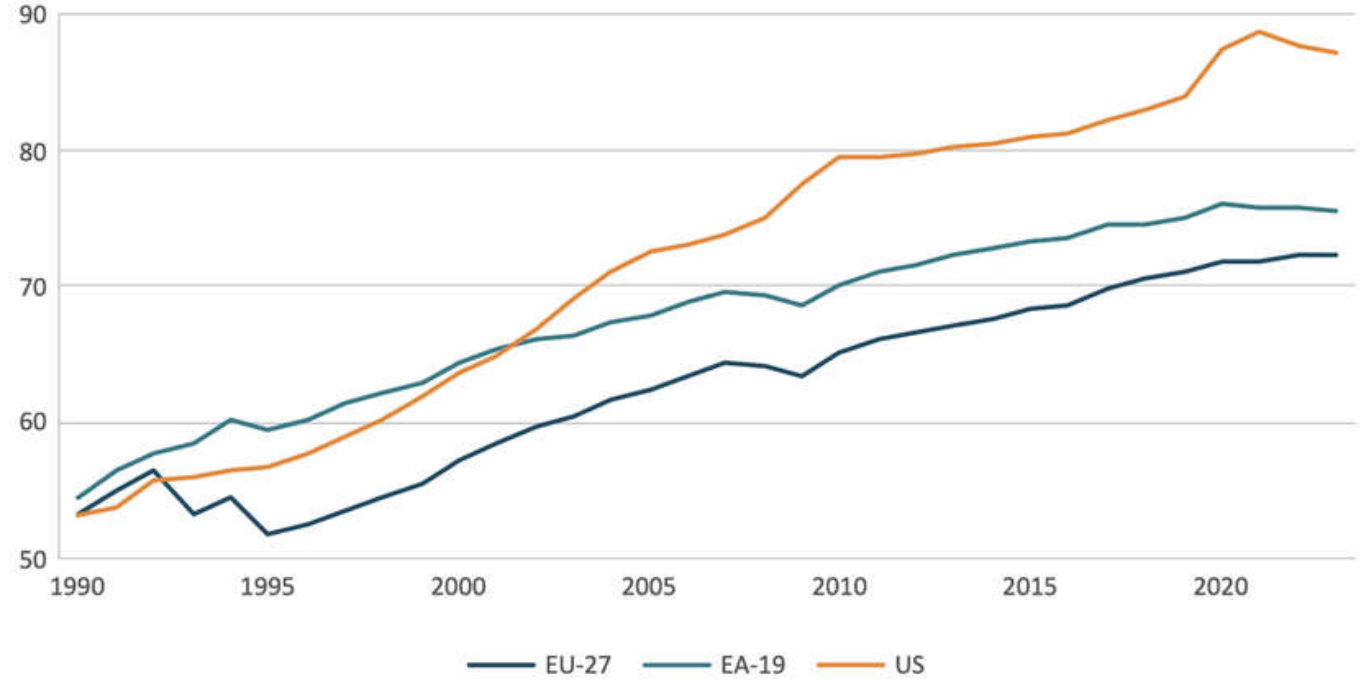
Die Welt (2024): "Why Europe is losing the race for innovation"
https://ec.europa.eu/newsroom/eismea/items/826237/en

¿Por qué Europa está perdiendo la carrera en productividad?

"For decades, the EU's productivity growth has consistently lagged the United States, leading to slower growth in living standards and decline in global economic power."

"Four major forces fuel this productivity divide. Firstly, the EU's investment in research and development (R&D) pales in comparison to the U.S., leading to fewer patents and a slower pace of technology-fuelled innovation. Secondly, Europe trails America in the stock and growth of intangible capital investments, which are crucial for adopting and diffusing new technologies that drive productivity. Thirdly, the EU market exhibits slower business creation and destruction compared to the US. This rigidity hinders the flow of resources towards the most productive firms. Lastly, despite boasting higher levels of trade openness, the EU attracts less Foreign Direct Investment (FDI) than the US, curbing its access to cutting-edge global technologies and expertise."

"To close the gap, European policymakers should implement a comprehensive strategy for faster productivity growth. The first step is turning up the dial on R&D spending, targeting 4-5 percent of GDP by 2040. Next, Europe should prioritise investments in intangible assets and lay down the digital infrastructure that will underpin future growth. Revitalising the single market is also crucial: reducing internal and external market barriers for services, the primary vehicle for trading intangible assets. Moreover, the EU should foster a market environment that encourages entrepreneurship and facilitate the entry and exit of firms so resources cascade towards the most productive sectors."



EU and US GDP per hour worked (2022 international dollars, PPP)

EA-19 = Belgium, Germany, Ireland, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Greece, Slovenia, Cyprus, Malta, Slovakia, Estonia, Latvia, Lithuania

"The Letta report, published in mid-April 2024, identified a lack of integration within the EU's single market as a key obstacle to European growth."

"Europe's economic challenge is not about working longer hours or taking shorter holidays but improving the amount of value-added generated by the inputs to the economy. Arguably, enhancing competitiveness essentially means boosting economic productivity: higher productivity means that business can draw on more efficient production and better compete globally. Therefore, any discussion on charting a corrective course on EU's declining competitiveness requires a focus on productivity."

Erixon, Fredrik; Oscar Guinea; Oscar du Roy (2024): "Keeping Up with the US: Why Europe's Productivity Is Falling Behind"
https://ecipe.org/publications/keeping-up-with-the-us-why-europes-productivity-is-falling-behind/

Europa necesita ser una potencia geoeconómica

"European countries are increasingly using economic statecraft, such as sanctions, export controls or industrial policy, to respond to geopolitical challenges. To co-ordinate a comprehensive response, the next European Commission needs a geoeconomics vice president."

"Economic statecraft is in fashion. Sanctions, export controls, tariffs, investment screening mechanisms, and trade agreements have become go-to tools for Western states to pursue geopolitical goals. This trend is fuelling the rise of geoeconomics, a term that has two definitions. In a broad sense, geoeconomics analyses the interplay of economics and geopolitics in the areas of trade, technology, or finance. In a narrower sense, geoeconomics refers to the use of economic tools to implement foreign policy – fuelling a merger between geopolitics and economics.

The European Union has long been a big player in geoeconomics, leveraging its economic and financial might to advance its interests. Yet the bloc is proving increasingly ill-equipped to deal with growing geoeconomics-related issues, mostly because of scattered responsibilities between the European Commission and member states. Sanctions, for instance, are adopted at the EU level, but implemented by member states – opening loopholes as European capitals interpret EU-wide rules differently. Conversely, it is up to EU member states to design foreign investment screening regimes – fragmenting the European investment landscape. This situation calls for a bold remedy: the appointment of a vice president for geoeconomics in the next commission."

"The EU and its member states are increasingly using economic tools and leveraging the activities of private firms to pursue foreign policy goals … The implementation of sanctions on Russia, for instance, depends on the private sector. These measures curb the activity of private companies and it is up to banks to check the compliance of the transactions that they process."

"The EU's response to Beijing's increasingly confrontational stance also relies on economic policies. Brussels's strategy currently focuses on de-risking, that is to say reducing economic reliance on Chinese firms for critical goods and preventing the transfer to China of technology that could fuel

advances of the Chinese military. To implement its de-risking ambitions, the EU mostly relies on export controls (for instance on semiconductors) and on policies to develop Europe's domestic production of critical goods (such as medicines, clean technologies, or critical raw materials)."

"The EU's economic dependency on China is particularly acute for green technology, which will be crucial for the bloc's energy transition – a third existential challenge that merges economics and geopolitics … The EU is on its own to face the challenges that the war in Ukraine, de-risking, and the green transition pose."

"Boosting the EU's green competitiveness will not be easy, either, as the bloc is increasingly squeezed between America and China. While Beijing is flooding the world with its massive production of cheap green goods, the United States is adopting protectionist policies like the Inflation Reduction Act to develop its own clean technology sector. Washington's strategy highlights how, on many economic issues, Europe's military allies will also remain its economic competitors."

"The EU needs to build some geoeconomics muscle. The first task is to build an overview of how geoeconomics challenges are interlinked … The second task … is to strengthen channels of communication with the private sector on geoeconomics issues. Private firms lament that sanctions, for instance, are handled by at least three different general directorates at the commission. Companies also often first hear about new measures from the media. Here again, a geoeconomics vice president would come in handy … On the international scene, appointing a geoeconomics vice president would boost the EU's credibility towards its allies … The US is not the EU's only ally: a geoeconomics vice president would also help boost engagement with other like-minded partners such as Australia, Canada, Japan, South Korea, and the United Kingdom."

"Beefing up the EU's geoeconomics game would also be a useful strategy towards foes. Market access is the EU's greatest asset: perhaps China would have thought twice before engaging in a trade row with Lithuania if the bloc had threatened retaliatory measures curbing the access of Chinese firms to the entire EU market. Greater EU cohesion also reduces the risk of seeing adversaries play member states against each other. This is critical at a time when Russia and China are seeking to foment divisions across Europe on topics like sanctions."

Demarais, Agathe (2024): "It just makes cents: Why the EU needs to step up its geoeconomics game"
https://ecfr.eu/article/it-just-makes-cents-why-the-eu-needs-to-step-up-its-geoeconomics-game/

2.3 Política industrial en Asia: Japón, Corea del Sur, China

El modelo japonés de desarrollo y de política industrial

"The extraordinary economic growth, technological accomplishments, and bulging trade surpluses of Japan have been a source of admiration and envy the world over (…) With the diffusion of growth to Korea, Taiwan, Southeast A'iia, and China, the 'Japanese model of economic development' seems to be spreading across Asia. When China released a new industrial policy in 1994, Chinese officials reported that they had 'devoted considerable research to the industrial policies of the Ministry of International Trade and Industry (MITI)'. For more than a decade Malaysia's leaders proclaimed their determination to 'look East' for inspiration. Japanese officials pushed the World Bank to modify laissez-faire approaches and promote Japanese industrial policy as a model for developing countries, particularly in Asia. When financial crisis hit Asia in 1997, many governments resisted the neo-classical prescriptions of the IMF, preferring the more gradual and hands-on approach to economic affairs pioneered by Japan.

The most controversial aspect of Japanese-style industrial policies was targeting or 'picking winners'-attempts by government to promote promising industries by restricting imports and providing low-interest loans and tax breaks. Another major theme was combining competition with cooperation. Government and business were seen as cooperating in the face of foreign competition, forming a kind of 'Japan, Inc.' In the 196os the Japanese government also encouraged cooperation within business groups to fend off potential foreign purchasers. Especially striking was the emphasis on promoting cooperation among competitors."

"Japanese firms established cartels to facilitate cooperation in production, pricing, investment, and mothballing of excess capacity. The government often encouraged electronics and machinery firms to create research and development (R&D) consortia to develop, standardize, and diffuse new technologies. The government also encouraged standardization of new product formats and communication protocols. In some cases, industrial policy attempted to improve coordination among upstream suppliers and downstream assemblers."

"Many accounts of industrial policy in Japan argue explicitly or implicitly that cooperation among competing firms on such issues as cartels, consortia, and standardization is common and successful."

"Collective action plays a large and growing role in industrial policy (…) For decades after the transition to export-led growth, both Korea and Taiwan remained highly statist. Formal and informal protection against imports remained strong. Both countries (but particularly Korea) monitored and restricted incoming foreign investment. Both countries (but particularly Taiwan) made strategic use of state-owned enterprises and quasigovernmental research institutes (…) In both countries, interest in collective action increased while statism decreased, but the balance was still on the side of targeting. The Japanese case is more complex. Into the early 198os protection and promotion were ubiquitous in Japan as well. Even in autos, Japan's most competitive industry, tariffs were not eliminated until 1978, and only in 1983, after great pressure from the United States, did Japan drop its expensive and time-consuming requirement for inspecting imported cars one by

one rather than on a sample basis (…) In promising but not yet competitive industries, such as satellites, biotechnology, and supercomputers, as well as weak industries, such as paper and pulp, protection and promotion continued into the 1980s and even 1990s, and were reduced partially and only under relentless pressure from the United States."

"From the mid-196os, the relative importance of promotion and protection swung decisively in favor of the latter (…) The relative decline of promotion did not mean industrial policy was irrelevant after the mid-tg6os or even the early 198os. More important than active arm-twisting was the creation and manipulation of market structures that gave firms incentives to compete in ways consistent with the government's vision of the competitive future of the Japanese economy. An obvious example was brokering mergers in such industries as steel and paper to create more oligopolistic industry structures (…) The methods used by the government and its surrogate Industrial Bank of Japan to shape markets often centered on collective action: encouraging concentration and cooperation, accepting and even promoting cartels and entry controls."

"In sum, while promotion of collective action was not the whole of industrial policy, it long played an important role in Japan both in coordinating the activities of existing industries and in shaping markets. It complemented protectionist and promotional activities. Those forms that required strong sanctioning by the government (…) However, as the significance of protection and promotion declined, the relative weight of collective action in industrial policy increased."

Noble, Gregory W. (1998): *Collective Action in East Asia. How Ruling Parties Shape Industrial Policy*, Cornell University Press.

Política industrial: Japón vs EEUU

Tyson y Zysman (1989) comparan la experiencia de Japón y EEUU en política industrial. La base de la comparación es simple: el gobierno japonés tradicionalmente aplicó medidas diferentes a las del gobierno de EEUU y el resultado (al menos, hasta fin de la década de los 1980s) fue superior en Japón (en términos de ciertos indicadores de desarrollo). Y sin necesidad de compararse con los EEUU, el desarrollo económico de Japón en la segunda mitad del siglo XX es un éxito absoluto. Los hechos que los autores presentan son los siguientes.

- La industria japonesa se ha consolidado no sólo internacionalmente sino en los mercados de EEUU. Hay numerosos ejemplos de la consolidación e incluso dominio: confección de ropa de bajos salarios y con uso intensivo de mano de obra, acero y automoción, construcción naval, semiconductores intensivos en tecnología…
- Simultáneamente, en los mismos sectores en que se ha manifestado el éxito japonés, las empresas de EEUU han perdido cuota de mercado (en el propio y el global).
- Japón ha aplicado políticas que la economía ortodoxa considera graves errores, como proteger la economía de la competencia externa e intervenir en sectors industriales (e incluso empresas concretas). Viendo los resultados positivos de la industria japonesa, caben dos explicaciones: o la industria japonesa se desarrolló a pesar de políticas erróneas de su gobierno o las prescripciones ortodoxas están equivocadas.

- Las instituciones americanas se han desarrollado en el siglo XX en consonancia con su posición dominante no con relación a un entorno internacional cada vez más competitivo.
- En la variante japonesa del capitalismo, los mercados se consideran instrumentos de crecimiento, no de eficiencia a corto plazo, y el gobierno tiene como misión prioritaria establecer incentivos para promover el crecimiento por medio de mercados (las ventajas competitivas en mercados internacionales son fruto de deciones políticas, no dictadas por condiciones tecnológicas o disponibilidad de recursos).

"From the vantage of traditional economics, Japan has made very serious policy errors. It has, for example, protected its domestic economy against foreign competition and intervened in specific industrial sectors and in the affairs of particular firms. Perhaps its capacities and resources have been so great that it has succeeded despite its policy errors. Or perhaps, as this book suggests, traditional American economic and political conceptions about the dynamics of international trade and domestic development are flawed and must be reconsidered in view of Japan's spectacular development success."

"From low-wage, labor-intensive apparel through shipbuilding, steel, and automobiles to technology-intensive semiconductors, Japanese industry has established positions in the U. S. and world markets. More troubling, in those same sectors, American firms have lost market share at home and abroad."

"As Japan reaches industrial maturity in a broad range of industries, its government is exerting substantial efforts to build a Japanese position in advancing technologies. Agencies such as the Ministry of Trade and Industry (MITI) … are involved. So, also, are less well-known agencies such as the Science and Technology Agency and the Ministry of Health."

"For the first twenty-five years of the postwar period, America was indeed a hegemon. It had the capacity to shape the international system, forcing others to play by its rules. Its domestic economy was little affected by economic policy choices abroad Interdependence was for others; the United States was at the center of the system. America's capacity to ignore international pressures, its place as a hegemon, ended with the floating of the dollar in 1971. We had to change the international rules to accommodate our own domestic needs."

"In the years since 1971, the international position of the American economy has sharply eroded. America's ability to impose its preferences in the face of opposition from the other advanced countries has weakened. America no longer dominates the international economy."

"The shifting patterns of trade and the emergence of new lines of technological development force new tasks on the United States … The purposive and successful domestic as well as trade strategies of our competitors will force the United States to adjust. We are discovering that there are different ways of organizing capitalism … America's economic and political institutions have evolved in the twentieth century in a manner that suits its once dominant position, not in a manner that suits the increasingly competitive international environment."

"We cannot respond to our problems unless we can identify them. The Japanese success and the emergence of new forms of industrial organization and manufacturing pose an important

intellectual challenge … There have been many efforts to examine the patterns of growth in Japan to demonstrate that state influence has been less important than generally understood or has been counterproductive. There have been attempts to show that Japan's policies of import substitution and protection targeted at specific industries did not matter or did not work. Such efforts try to reshape the case to fit the theory."

"… although Japan is an advanced capitalist democracy, the institutions of capitalism that it has built in the context of its unique experience with industrialization differ fundamentally from those encountered in American capitalism. In the Japanese variant of capitalism, markets are emphasized as a source of growth rather than of short-run efficiency, and a primary role of government is to supply incentives to promote growth through markets. The perspective motivating Japanese policy is explicitly dynamic and explicitly developmental. From this perspective, the competitive advantage of a nation's producers in world markets is created by policy rather than given by immutable resource and technological endowments. Moreover, in a dynamic world, temporary policies to create competitive advantage for domestic producers can have long-term effects that are difficult to reverse."

Tyson, Laura d'Andrea; John Zysman (1989): "Preface. The argument outlined", en Johnson, Chalmers; Laura d'Andrea Tyson; John Zysman; eds. (1989): *Politics and productivity. The real story of why Japan works*, HarperBusiness.

Industrialización de Japón

"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/

Política industrial en Japón desde la 2ª Guerra Mundial

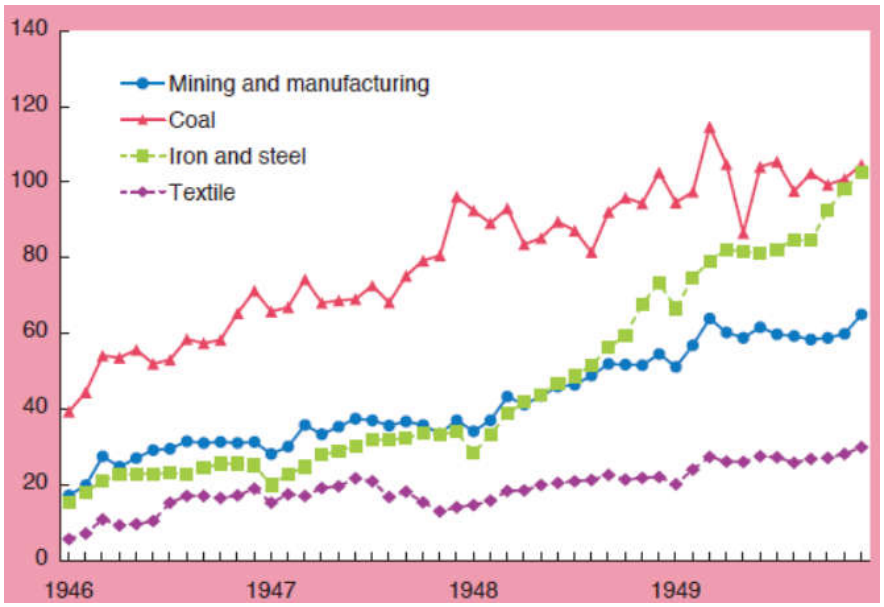
"In this period, the Japanese government, more specifically the Ministry of Commerce and Industry (1945-1949), the Ministry of International Trade and Industry (MITI, 1949-2001) and the Ministry of Economy, Trade and Industry (METI, 2001-present) designed and implemented a number of industrial policies, i.e. micro-level policy interventions to firms, industries and markets."

"**Economic Recovery under Planning & Control**

In 1945, when World War II ended … reconstruction of the economy was an urgent issue for the government. As the scarcest materials were coal and steel, a policy to promote the production of these two materials, the 'priority production policy', was implemented in 1947 and 1948."

"Since the late 1930s, when the Sino-Japanese War broke out, a large part of the Japanese economy had been under the planning and control of the government. Prices were controlled and, accordingly, commodities were rationed, based on the plan decided by the government. The priority production policy was implemented based on this system."

"Further, the government established a special public financial institution, the Reconversion Finance Bank (RFB). According to the fund allocation plan by the government, the RFB selectively loaned money to the firms that were supposed to be essential to recovering production of the strategic industries, including coal and steel. To perform this function, the RFB raised funds by selling its bonds directly to the Bank of Japan (BOJ)."



Production Indices (1934-36=100)

"As resources were concentrated in the coal and steel industries, the allocation of resources to other industries was reduced by the policy. In this sense, the decline in textile production was a negative side effect of the priority production policy. This policy had other negative side effects as well. The policy, in giving priority to production increases, reduced the incentive of private firms to enhance efficiency, and the monetization of the RFB bonds by the BOJ accelerated inflation."

"**Transition to Market Economy & Promotion of Industries**

The Japanese economy transited from a regime of planning and control to a market economy in 1949, when the US minister Joseph Dodge came to Japan to give advice on economic policy … Dodge instructed the Japanese government to balance its budget, stop new loans from the RFB, and set a fixed exchange rate of 360 yen per US dollar (…) With respect to microeconomic policy, he instructed the government to abolish controls on prices and distribution. Backed by the powers of the occupation authorities, these policies were implemented swiftly, making the Japanese economy successfully transit to a market economy.

Abolition of government controls and the fixed exchange rate implied that Japanese industries and firms had to compete with each other and with foreign industries and firms. The government considered that it was necessary to promote new industries because some of the existing industries would lose competitiveness compared with the industries in developing countries, which would endeavor to promote industries based on low wages (…) In this circumstance, the government devised a set of new tools for industrial policy.

First, two new public financial institutions, the Export Bank of Japan (EBJ) and the Japan Development Bank (JDB), were established in 1950 and 1951, respectively. The EBJ was renamed the Export-Import Bank of Japan (EIBJ) in 1952. The funds for these financial institutions were mainly from the Fiscal Investment and Loan Program (FILIP), which started in 1948. FILIP is a program that invests and loans government funds to the private sector. The largest portion of its funds came from postal savings."

"Second … the government reduced corporate tax in cases where a firm installed certain sorts of equipment that were effective in promoting rationalization, according to the law, and thereby promoted investment in new equipment. Third, … subsidies for R&D. Policy-based finance, tax relief and subsidies for R&D have been employed as the major industrial policy tools up to the present.

Besides these tools, there was another powerful policy tool utilized in the 1950s, the foreign exchange allocation system. In the 1950s, all foreign exchange was concentrated with the government, which then allocated foreign exchange based on the 'foreign exchange budget.' The part of the budget for commodity imports was drawn up by MITI. The foreign exchange budget was classified into two categories, the budget for foreign exchange allocation goods (FA goods) and that for automatic approval goods (AA goods) … the FA budget accounted for 70-80% of the total foreign exchange budget.

The distinction between the FA and AA budgets was essential because, with respect to the FA goods, the budget was allocated to individual commodities. This implied that MITI could impose de facto import quotas on FA commodities, using the foreign exchange allocation budget, given their prices. MITI used this system to protect domestic industries. Meanwhile, in relation to industries that heavily depended upon imported raw materials, by controlling foreign exchange allocations to the raw materials, MITI could indirectly control production in those industries. Furthermore, it is notable that MITI allocated the foreign exchange budget for each FA good to individual firms. This implies that MITI allocated rent to individual firms because the import of FA goods was more or less restricted. Thus, MITI promoted exports and investment of individual firms by linking the foreign exchange allocation to exports and equipment, respectively. The foreign exchange allocation system continued until the early 1960s, when Japan implemented the 'trade liberalization' recommended by the IMF, GATT, and the US government."

"In the high growth period … the government implemented various industrial policies. They included the policy for updating the equipment of basic industries (power generation, iron and steel, etc.), and promotion of new industries (synthetic fibers, automobile, petrochemical, computers, etc.). They were typical 'targeting' policies, which aimed at promoting the industries that were regarded as strategic by the government.

The 'industrial rationalization' policy in the 1950s was a case of a targeting policy (…) Indeed, steel became one of the major export commodities from Japan, which caused trade frictions with the US in the 1960s.

Meanwhile, in the high growth period, some industries, such as the coal and natural fiber industries, lost a comparative advantage. For these declining industries, the government implemented the industrial adjustment policy to facilitate capacity reduction. The adjustment policy for the coal industry started in 1955 when the Coal Industry Rationalization Law was legislated. Under this law, the Coal Industry Improvement Public Corporation was established to buy inefficient mines from private mining firms to scrap."

"**Shift of Growth Path & Industrial Adjustment**

The First Oil Crisis in 1973 was not only a turning point in the growth of the macroeconomy, but it also had impacts on individual industries. In particular, the sharp rise in the oil price damaged the basic material industries, which were energy intensive, and many of them subsequently faced a structural depression … In these circumstances, MITI extensively implemented the industrial adjustment policy from the late 1970s to the 1980s (…) MITI designated depressed industries facing structural problems. Each designated industry drew up a plan for equipment disposal to be approved by MITI, which supported the implementation of the plan with policy-based finance, tax relief and exemptions from the Antitrust Law."

"… the industrial adjustment policy by MITI was criticized by the US in the context of bilateral economic friction in the 1980s. From 1983 to 1984, the Industrial Policy Dialogue was held between Japan and the US, during which the US argued that the competitiveness of Japanese firms was nurtured by promotional policies targeting strategic industries and, hence, that it was unfair. In addition, the US criticized the Designated Industries Structural Revision Extraordinary Measures Law, arguing that it aimed at preserving declining industries and was a barrier to imports. Facing these criticisms, along with the criticism of an expanding surplus on the current account balance, the Japanese government made efforts to compromise with the US government."

"This circumstance brought about a substantial change in industrial policy, especially the industrial adjustment policy. Because of the sharp appreciation of the yen after the Plaza Agreement in 1985, industrial adjustment was still an important issue for industrial policy in the late 1980s … In 1987, the Law for Facilitating Transformation of Industrial Structure was legislated … This law differed from the 1983 law in that its objects were individual firms and areas, not industries, and that it did not include exemptions from the Antitrust Law. These characteristics distinguish the policies after the late 1980s from the traditional industrial policies prior to that time. Shinji Fukukawa, who was administrative vice-minister of MITI from 1986 to 1988, … evaluated this change as indicating the transition of industrial policy from an industry-oriented policy to a market-oriented one."

"**Structural Reforms for Activating Innovation after Long Stagnation**

In 1991, the asset bubble collapsed and the Japanese economy transited to the third phase, i.e. the phase of long stagnation. In this period, the main issue of industrial policy shifted from industrial adjustment to structural reform of the economy. At first, structural reform had an aspect of international harmonization of economic institutions, in response to criticism from the US. However, as economic stagnation continued, structural reform was given a new mission, namely reform for constructing a new institutional basis for economic growth."

"In the 1980s, the Japanese economy almost matched the US economy, not only in terms of per capita GDP but also in terms of total factor productivity (TFP) … From the Meiji Era, the Japanese economy had continued to grow by adopting and improving technologies from advanced countries but when the catch-up had been achieved, Japan needed to create original innovations to continue its growth."

"In 1979, MITI proposed the concept of Japan as a 'technology-intensive nation' as a part of its 'Vision for Industrial Policy in the 1980s.' The vision claimed that 'a turning point is coming, a move away from an industrial pattern of 'reaping' technologies developed in the seedbeds of the West, to

a pattern of 'sowing and cultivating' that displays greater creativity. With the century of catch-up modernization at an end, from the 1980s onwards we will enter a new and unexplored phase.'

One approach that MITI took to achieve economic growth based on innovation was structural reform of the economy … It was stated that not only government regulations but also various private practices restricted access to the Japanese market and the emergence of new businesses. In addition to regulatory reform, it proposed a broader reform of institutions, including the corporate system, the employment system and the financial system. The idea is that, whereas these institutions worked as the foundation of the postwar growth of the Japanese economy, they were not appropriate to a new pattern of economic growth based on original innovations."

"Another more specific approach to activating innovations was the industrial cluster policy that METI launched in 2001. It was a type of regional economic policy … motivated by the innovation-based growth of Silicon Valley, and it aimed to promote industrial clusters incubating innovations. For this purpose, METI designated 20 industrial clusters around Japan. Many firms and universities participated in these clusters. METI supported those firms and universities to form networks with each other, and it also mediated between the firms and regional banks. "

"It should be stressed that Japanese industrial policy is not a static set of policies but rather is characterized by flexibility. In the changing economic environment, industrial policy has been evolving to address the issues that the Japanese economy faces, devising tools under the constraints operating in each period."

Tetsuji, Okazaki (2017): "Industrial Policy in Japan: 70-Year History since World War II"
https://www.rieti.go.jp/en/papers/contribution/okazaki/06.html
(Article on the March/April 2017 issue of Japan SPOTLIGHT published by Japan Economic Foundation)

Revolución industrial en Japón

"In 1871, the recently established Meiji government sought to stave off a feared collapse of its nascent authority by abolishing Japan's domains and replacing them with prefectures subordinate to the center … The Meiji leaders had resolved that their government needed to be the sole political power in the land so it could perform the urgent task of constructing a modern state.

Their deepest concern was that Japan might become a colony under the control of one of the great powers. This had been the fate of much of India and Southeast Asia, while China had been forced to yield Hong Kong to Britain in 1842 after losing the First Opium War. Consequently, they believed that the country needed to modernize as rapidly as possible, building up its economic strength to reinforce its military and protect itself from invasion.

This was why many of Japan's leaders and other important government officials set off on the Iwakura Mission, a journey of observation and learning to the United States and Europe … The mission also carried many students, and its participants contributed greatly to the country's modernization on their return to Japan.

Trains, Ships, and Telegraph Wires

Around the same time, the Meiji government concentrated its efforts on promoting industry and introducing modern forms of enterprise with the aim of fostering capitalism in Japan. One early stage was to sweep away the feudal system of internal checkpoints, post stations, and merchant guilds as barriers to industrial development. New infrastructure included the first telegraph line between Tokyo and Yokohama in 1869. Five years later, the telegraph network stretched from Nagasaki to Hokkaidō, while an undersea line further connected Nagasaki to Shanghai. In 1871, a modern postal service replaced the former courier system, and post offices were established around the country, selling stamps and postcards at set prices. In 1877, Japan joined the Universal Postal Union, linking its postal service to the world. It imported its first telephones the same year.

A rail service started between Tokyo and Yokohama in 1872. This initial route relied greatly on British assistance, as the European power supplied financing, train cars, and even the chief civil engineer Edmund Morel. In 1874, a new line linked Kobe to Osaka, which was connected in turn to Kyoto in 1877. By the turn of the century, the network had spread across the whole of Japan. The government also invested in upgrading the country's major roads."

"Firm government backing for the private company Mitsubishi did much to ensure that Japanese shipping could compete with Western companies. According special privileges to specific organizations was one way the Meiji leaders aimed to foster modern industry."

"The government also set up and operated many factories and establishments in fields like light industry and agriculture to boost the development of private industry. In the industrial sector, these included the Shinagawa Glass Factory, Aichi Spinning Mill, Fukagawa Cement Works, and Sapporo Brewery. Perhaps the most famous is the Tomioka Silk Mill in Gunma Prefecture, which is now a UNESCO World Heritage site. It was built in 1872, incorporating 300 silk reeling machines of the latest design, imported from France. Paul Brunat headed a team of French technicians, mainly female, who oversaw operations and trained Japanese workers. In their turn, these workers passed their knowledge on at mills across the country.

Industrial Revolution and Capitalism

Cases like the railways and Tomioka Silk Mill demonstrate how Western technicians and academics hired by the government made great contributions to the vigor of Japanese industry. Some 3,000 foreign specialists came to Japan in total, with more than 500 present in the peak year of 1876 … The bounteous rewards on offer to Western experts indicate the fervor of the Japanese government to modernize the country's industry.

The Home Ministry organized its first Domestic Industrial Exposition in 1877 at Ueno Park, going on to hold five in total, with the last in 1903."

"In the early 1880s, Minister of Finance Matsukata Masayoshi introduced deflation policies that set the prices of agricultural products tumbling and bankrupted many farmers. Some wealthy individuals benefited, however, by buying up cheap agricultural land from those who had gone under … Together with rich city merchants, they started buying and selling stocks and setting up new companies. The three years from 1886, in particular, were a boom time for establishing companies.

Spinning, silk reeling, and other light industries were soon thriving. The privately run Osaka Spinning Mill incorporated many British-made spinning mules, pioneering large-scale, steam-powered mechanized production. Employees worked in day or night shifts …. Incidentally, many of the workers laboring long hours for little pay were the children of bankrupt farmers who had fallen victim to deflation policies … Major production and export of cotton and silk yarn ensured Japan achieved an industrial revolution in light industry in the late nineteenth century. Less than 30 years after the Meiji Restoration in 1868, the country had established a capitalist economy.

The Edo Period Roots of Modernization

The groundwork for Japan's rapid modernization in the early Meiji era (1868–1912) was, however, laid in the Edo period (1603–1868).

In addition to the samurai elite who studied at domain schools, a large number of common people learned to read and write at terakoya, or local temple schools. The publishing industry flourished, allowing for further self-improvement and education through reading. Japan also developed its own advanced form of mathematics, called wasan. The country's primary education was arguably the best in the world at the time (…) In the last days of the shogunate, Japan was not greatly lagging behind the West and was able to quickly imitate its technology."

Japan's highly developed Edo-period education system was a key factor in its swift turn to industrialization and a capitalist economy after the Meiji Restoration, as well as its subsequent position as a major world power."

Atsushi, Kawai (2019): "Japan's Industrial Revolution"
https://www.nippon.com/en/japan-topics/b06904/

Claves de la innovación en Japón

"For some 30 years, Japan's real economic growth rate has remained stagnant, at around 1%. The seriousness of the Japanese economic situation has been highlighted again by the Japan Center for Economic Research's projection that, by 2023, Japan will be surpassed by Taiwan and South Korea in terms of per-capita gross domestic product (GDP). To overcome the situation, it is essential to increase the value added per worker—that is, labor productivity."

"There is a broad consensus on the view that in order to raise labor productivity in Japan, it is necessary to redistribute resources to sectors and companies with high levels of innovation and productivity."

"According to an estimation by Professor Takizawa Miho of Gakushuin University … labor productivity in Japan was not necessarily lower than in the United States across all industries … On the other hand, labor productivity is markedly lower in Japan than in the United States with respect to many services industries, including retail and wholesale trade (68% lower) and real estate (73% lower). Moreover, those low-productivity industries account for a large portion of the overall value added in Japan, dragging down the total productivity level of all Japanese industries compared with all U.S. industries.

Another feature of those industries is the large share of small and medium-size enterprises (SMEs). According to the 2016 Economic Census, the share of companies with a workforce of 30 or less employees was 48.8% in all industries and 30.3% in manufacturing industries, whereas it was much higher in the wholesale and retail trade industry, at 61.9%, and in the real estate industry, at 60.3%. To raise productivity, it is necessary either to bring up the productivity of SMEs, which comprise a large component of industries, or to shift resources from SMEs to high-productivity industries and companies."

"One example of an industry whose productivity rose due to the spread of technological innovation among many SMEs is the Japanese textile industry at the beginning of the 20th century … In 1905, no habutae factories were using power looms in Fukui Prefecture, but in 1914, almost all factories there were equipped with power looms. Power looms had a significant impact on productivity."

"Behind this rapid spread of technological innovation were several factors. First, adopting new technology became easier than before. The development of domestic power looms reduced costs, while the expansion of electric power networks improved access to mechanized power.

Second, wages rose (…) Apparently, it was because of the wage increase that the shift to labor-saving technology, which had recently become more easily available, made progress.

Another point … is that technological change was not only the result, but also the cause of the wage increase … In short, there was a virtuous circle of rising wages and improving access to new technologies leading to the spread of those technologies, which in turn resulted in a further wage increase.

Another historical example is the mechanization of agriculture in postwar Japan. KITAMURA Shuhei, an associate professor at Osaka University, paid attention to the fact that at the same time as the rapid spread of tractors among farmers in the 1960s, a large-scale movement of labor from the agricultural sector to non-agricultural sectors occurred. He analyzed the relationship between this phenomenon and the farmland reform that was carried out immediately after the war.

According to his research paper, the factors that led to the rapid spread of tractors were the development of low-cost, high-performance tractors by Honda Giken Kogyo, which is now known as Honda Motor Company, and an increase in landed farmers due to the farmland reform. Farmers who had become landed were highly motivated to improve farm management and actively introduced low-cost tractors. Second and later male children and female children, who became redundant as a result of the rising productivity, moved to non-agricultural sectors."

"… in the 1960s, SMEs' capital investment in labor-saving measures increased in manufacturing industries. The 1968 White Paper on Small and Medium Enterprises in Japan pointed out that SMEs' capital investment activity became vigorous from 1966 onwards and cited 'persistent appetite for investment to promote rationalization and modernization in order to adapt to changes in the surrounding environment, such as labor shortages' as one of the motivations.

From those historical experiences, we can extract two important implications regarding the problems facing the Japanese economy today. In both of the abovementioned cases, we see two drivers that triggered a productivity increase for many small manufacturers.

The first driver is a wage increase and the second driver is low-cost access to new technologies. Looking at the current situation of the Japanese economy, we can see that the shrinking labor force provides the necessary condition for a wage increase … As for the second driver, the necessary conditions will potentially be met as a result of the development of general-use technologies, including artificial intelligence (AI) and robotics. If low-cost and easily usable labor-saving technologies are developed through the application of such general-use technologies, the condition for the second driver will be satisfied, and this, coupled with the condition satisfied for the first driver, will lead to the spread of those technologies among small businesses and raise their productivity. That will lead to a further wage increase … raising the possibility that the Japanese economy may escape from its prolonged stagnation caused by factors such as low wages and low productivity.

Okazaki Tetsuji (2023): "Wage Increases and Low-cost Technologies are the Keys to Innovation"
https://www.rieti.go.jp/en/papers/contribution/okazaki/09.html

¿Por qué China no se desarrolló antes de Deng Xiaoping?

"… for a long time China was constrained because the Communist Party of China (CPC) was captive to the two great socialist fallacies that undid socialist modernisation programmes in other communist states. The first of these was that agriculture could only be efficient at scale, leading to the collectivisation of farming in the mid 1950s (…) However, agriculture is not like manufacturing, where scale is essential to low unit costs and to the technological learning process that enables firms to produce more sophisticated products. In agriculture, the product never changes – rice is rice and corn is corn."

"The second great communist fallacy (…) was that manufacturing could be developed without trade –through a policy of self-sufficiency, or autarky. In essence, this boils down to a country's people staying home and trying to figure out technological problems on their own (…) The legacy of autarky in China was, by the 1980s, all kinds of passable but hopelessly inefficient industrial processes (…). Through autarky, China failed to develop a single industrial product with which it could compete internationally."

"In the era of Deng Xiaoping, China broke out from the two great socialist fallacies. First, household farming was restored. Then (…) China opened up to trade and, gradually, to foreign investment, allowing it both to absorb international technology and to begin to benchmark its own products in world markets (…) China – unlike south-east Asian states– has been paranoid about the advice it has been offered, and has prospered by virtue of its paranoia. Since 1978, China has posted an impressive developmental record, and has become the second east Asian state after Japan both to fascinate and unnerve western Europe and north America. The country has delivered a near 10 per cent average growth rate for three decades."

"In qualitative terms, China has not matched Taiwan in agricultural performance. It has not matched Korea for the speed and depth of its industrial upgrading. And it has not matched Japan in reinventing the nature of many industrial processes. But because China is so big and so populous – and, more darkly, because it is not an ally of the West – since 1978 it has managed to shake the

world (…) Thus far, China's financial system management has worked well in giving government the discretion to run effective developmental policy. However, as north-east Asia's experience has shown, manipulation and repression of a financial system to developmental ends offers only a limited window of opportunity before financial and corporate entrepreneurs, and ordinary citizens, find ways to evade the controls."

"Overall, China's government has lined up most of the ducks necessary to enable rapid economic development. However, there is little to suggest that China offers qualitative improvements to policies which have been used before (…) Contemporary chatter about the rise of a 'Beijing consensus' on development policy is a perversion of historical facts. The true break-out example in successful Asian development was Meiji Japan, and China is simply a follower in that tradition. China's development is exceptional not because of the tried and tested land reform, infant industry and financial repression policies that made it possible, but because of its scale."

Studwell, Joe (2013): *How Asia works. Success and failure in the world's most dynamic region*, Grove Press, New York.

Política industrial en China

"China has rapidly emerged to become a large economy and a technological power. Although still a middle-income country, China now has the world's second most important high-tech sector, as well as the world's largest manufacturing and internet sectors (…) To what extent can China's undeniable economic and technological success be reasonably attributed to specific policies, and more generally to a Chinese 'path,' or program of industrial policy?"

"Since 1978, the beginning of China's period of 'reform and opening,' market-oriented system reform and openness to the outside world have been the most prominent features of China's policy orientation. Trough the early years of the 21st century, market transition was undoubtedly the overwhelming focus of Chinese policy-makers. Even then, policy was gradual and incremental, and also exceptionally mutable, tackling different issues at different times, and moving forward sometimes faster, sometimes slower (…) There is little debate about the nature and cause of this achievement: China shifed to a market economy, growth accelerated, and rapid structural and technological upgrading followed.

Less widely appreciated, however, is that from about 2006, China began to make further fundamental shifs in development strategy. Direct government intervention in the economy —which had dwindled to almost nothing in the years 1998-2005— gradually began to increase."

"This new Chinese government effort expanded just as the Chinese economy was slowing. To be sure, the new policy package was a response to the slowdown, not the cause of it. In the 1980s and 1990s, market reforms had coincided with China's highest growth potential, as under-employed farmers migrated to new rural and urban occupations and China enjoyed a massive demographic dividend. Now, policy-makers were searching for —in their favorite phrase— 'new growth drivers.' In addition, from about 2015-2016, it became clear that artificial intelligence and big data had huge potential economic effects on economies worldwide. As technological change has accelerated, the ambition of China's planners and policy-makers has also expanded, and intervention has continued

and increased. Indeed, China's development strategy today may warrant a new name: China aspires to be the first 'government-steered market economy'."

"Between 1978 and about 2005, China's government steadily retreated from its initially all-encompassing control of the economy, growth accelerated, and comprehensive upgrading took place. New policies began to be initiated in 2006, starting slow and then accelerating. From 2009 through 2020, the government has strongly re-engaged in direct economic intervention, all while the economy has been steadily slowing (even before the coronavirus impact in 2020)."

"China's emergence as an economic and technological super-power is due primarily to the policy package that it followed from 1978 through the frst decade of the 21st century, that is, until about 2006. China's policy package today —that is, the policies that started tentatively afer 2005 but were fully in place by 2008-2010— are radically different. Because of this, it is a mistake to attribute China's success to the policies China is currently following. These policies are simply too recent to have had a determinative impact on today's outcomes. China is a technological superpower because it followed smart policies afer 1978, pursuing marketization and investment in human and physical capital. Whether or not the industrial policies that have been followed in the most recent decade will contribute to China's technological and economic prowess is not yet clear."

"**China is NOT Just Another East Asian Developmental State**

One often hears that China is following an industrial policy rather similar to that followed by Japan, Korea, and other earlier fast developing East Asian economies, so-called 'developmental states.' This is wrong in multiple dimensions. On one hand, China inherited a legacy of total government control when it entered the contemporary era (…) While Japan and Korea layered industrial policy on top of reviving war-shattered economies, those economies were primarily market-based and small-scale. China's starting point was precisely the opposite, and it spent thirty years throwing off the legacy of excessive direct government control.

On the other hand, China's new industrial policies, since about 2010, have been very different from those of Japan and Korea. The volume of resources the Chinese state invests in targeted sectors has been much greater than anything Japan or Korea ever invested, both as a share of the economy and even more so in absolute dollar amounts. Likewise, the nature of the targeting is also completely different. Japan and Korea steered the economy to catch-up, in clearly defined sectors where the objective was to match the performance of industry leaders (in Germany or the US); in China, the main focus has been on leap-frog, in the sense that the most heavily prioritized sectors have been those emerging areas where the technological leadership is less clear and there are few entrenched incumbents in developed economies."

"**There is NO Definable 'Chinese Road'**

Chinese policy-makers (…) have recently taken to declaring that there is a 'Chinese road' to development that may hold lessons for other developing economies (…) China is an enormous, diverse economy, and between 1978 and 2010 it grew faster, for longer, than any economy in human history (…) However (…) the distinctiveness of Chinese institutions, and especially the dominance of the Communist Party, means that transferability of successful experience is difficult."

"I have been told more than once by Chinese scholars that 'close government-business cooperation' is the essence of the Chinese model. But such a formulation does not differentiate China from many other less successful economies that also have 'close government-business cooperation.' As a result, such a formulation really does not tell us anything that is useful as a 'lesson.' Moreover, it doesn't describe very well any of the achievements of Chinese economic growth and development over the past forty years."

"**Conflict Among Technological Powers is NOT Inevitable**

Many people attribute the rise in conflict between China and other nations —not least the United States— to an inevitable 'Thucydides trap,' or competition between a rising "challenger" and a jealous incumbent. This view is not completely wrong, but it is hopelessly over-simplifed. One simple fact is that the incidence of conflict increased dramatically following the acceleration of China's industrial policy. The magnitude of China's intervention in emerging sectors has seriously disrupted international norms and agreements about the nature of economic and technological competition. This doesn't necessarily mean that China is 'wrong.' Some of those norms might be cozy agreements between comfortable entrenched powers, and might indeed be ripe for re-consideration and revision (…) T the world is faced with a more complex challenge: hammering out a set of rules and principles that will allow great powers to compete with each other without spiraling down into intensifying conflict."

"I define industrial policy as follows: Industrial policy is any type of selective, targeted government intervention that attempts to alter the sectoral structure of production toward sectors that are expected to offer better growth than would occur in the (non-interventionist) market equilibrium.

It only makes sense to talk about industrial policy if real resources are devoted to selective interventions that policy-makers make and they have real instruments available to shape the incentives of economic decision-makers. Simply stating a desired or expected outcome does not constitute an industrial policy, even if that statement is issued by an authoritative body (…) To be classifed as an industrial policy, there has to be an actual intervention into the real economy. Words that remain on paper do not count as an intervention, absent some real actions that have an impact."

"… A narrow definition of industrial policy allows us to make a very clear and unambiguous statement about Chinese industrial policy (…): Until 2006, China never had 'industrial policy.' Since about 2010, China has had industrial policy on a massive and unprecedented scale. The outcomes of post-2010 industrial policy in China have not been adequately studied and are as yet unknown."

"Evaluating the outcome and impact of industrial policy is challenging. There is no consensus about the impact of industrial policy in Japan or Korea, even though those economies ended their experiments with government industrial policy decades ago and have relatively good data available."

"I identify three things that industrial policy in China is NOT:

1. Industrial policy is not intensive investment in infrastructure (…)

2. Industrial policy is not investment in human resources (…) These investment in China's human resource base are quintessentially 'horizontal': that is, they improve the capabilities of the Chinese

economy across the board, without preference to any particular sector (…)

3. The existence of a local 'developmental state' is not ipso facto evidence of industrial policy (…) Local government entrepreneurship and investment in local public goods are certainly important features of China's developmental model, and contributed to China's rapid growth during its 'miracle growth' phase (1978-2010). However, China has tens of thousands of local governments, all engaged in expanding economic activity. They have to compete with each other in the marketplace, and are under great pressure to generate new revenues. In short, they behave more like firms than like governments in this respect, and it is hard to see how they aggregate into a pattern of government-sponsored development that is different from frms seeking proft through the market."

"China passed a major policy turning-point in 2006, beginning a steadily increasing commitment to the use of government industrial policy. That commitment increased around 2009-2010, afer the Global Financial Crisis. Most recently, with a further shift in 2015-2016, the government launched a new and intensifed round of industrial policy under the rubric of the Innovation-Driven Development Strategy (IDDS). Tis new round is bigger, more intrusive, and more comprehensive than any previous Chinese industrial policy. It is unprecedented (…) it is technologically and economically more sophisticated than any predecessors. Technologically, it can be seen as a response to the opportunity provided by a new wave of technological change, a set of 'general purpose' technologies that potentially will provide a long-term productivity boost to many sectors of the economy."

"Technological risk is present because the ultimate configuration of the new network and A.I. based technologies is unknown."

"Economically, China's policies are less distortionary than previous policies based on administrative instruments. They rely heavily on economic levers such as tax exemptions, and subsidized depreciation and research, to say nothing of the massive Industrial Guidance Funds."

"Chronic economic illness will develop if government is unable to liquidate multiple poor investments in which it has a stake, tying up credit and real resources in poorly performing assets and zombie companies. These risks are real, over a 3 to 10 year horizon. International risk arises from the reaction of other countries to China's industrial policies."

"It is unclear to what extent Chinese policy-makers have considered the technological, economic, and international risks of their industrial policies. It appears rather that policy-makers have been seduced by the vision of a technological revolution and a substantial re-ordering of global strategic relations and have rushed ahead with an aggressive and decisive round of industrial policies."

"Chinese industrial policies are so large, and so new, that we are not yet in a position to evaluate them. They may turn out to be successful, but it is also possible that they will turn out to be disastrous."

Naughton, Barry (2021): *The Rise of China's Industrial Policy, 1978-2020*, Universidad Nacional Autónoma de México.

Política antipolución en China

"… while China faced an unprecedented environmental health crisis, government leaders displayed strong autonomy in policymaking and the ability to transmit pressures down to the lowest hierarchy levels to get things done. This was evidenced in the anti-pollution campaign launched in 2013, which focused on controlling PM2.5—deemed the most harmful particulate matter. According to the Global Burden of Disease study, ambient PM2.5 pollution was responsible for approximately 1.4 million premature deaths in China in 2019. Thanks to the campaign, the average PM2.5 concentration dropped by 50 percent, from 72 micrograms per cubic meter (μg/m³) in 2013 to 36 μg/m³ in 2019."

"… it is premature to celebrate the end of China's war against pollution. The PM2.5 concentration of 29 μg/m³ still falls short of the WHO standard of 5 μg/m³. To put this into perspective, the most polluted city in North America for PM2.5 is Coffeyville, Kansas, with an average annual concentration of 19 μg/m³. More concerning is that after a decade of decline since 2013, the overall PM2.5 levels in China rebounded for the first time in 2023. This increase in PM2.5 levels occurred in 80 percent of China's provincial capitals, including Beijing.

Meanwhile, there is no indication that the government is reversing the increasing trend of other pollutants, such as ozone (O_3). Surface ozone is a significant air pollutant that exacerbates respiratory conditions like asthma and chronic obstructive pulmonary disease, and increases the risk of infections and cardiovascular diseases. In the absence of a multi-pollutant emission reduction strategy that coordinates the control of both PM2.5 and O_3 pollution, the density of O3 tends to rise as PM2.5 concentrations fall."

"While unfavorable weather conditions may play a role, there is clearly a diminishing returns problem in the authoritarian approach to pollution control. Since 2018, the annual reduction in PM2.5 levels has slowed."

"A major concern is the increasing dependency on fossil fuels. Before the pandemic, China had successfully reduced coal's share in its energy mix from 67.4 percent in 2013 to 57.7 percent in 2019. However, following widespread electricity shortages in 2021, China authorized 218 GW of new coal power within just two years—enough to power all of Brazil. By 2023, China's coal production reached a record 4.66 billion metric tons, up 2.9 percent from the previous year. In the meantime, China's coal imports also surged to a record 474.42 million tons, marking a 61.8 percent increase year-over-year. Consequently, coal's share of China's energy mix returned to the 2017 level of 60 percent."

Yanzhong Huang (2024): "China's Battle Against Air Pollution: An Update", 24 abr 2024
https://www.cfr.org/blog/chinas-battle-against-air-pollution-update

https://energyandcleanair.org/pm2-5-rebounds-in-china-in-2023-after-falling-for-10-years-straight/

China y robótica: ¿crecimiento o bienestar?

"Beijing is dramatically pushing eldercare robots as part of its national development plans to promote advanced manufacturing. But it is unclear how effective such policies will be in responding to China's mounting eldercare needs, particularly in rural China.

Central authorities have promoted robotics and technology as part of efforts to reform China's eldercare services for nearly a decade (…) The joint opinion issued in December 2024 by the Communist Party's Central Committee and State Council (…) emphasizes the need to develop 'humanoid robots, brain-computer interfaces, artificial intelligence and other technological products' as part of expanding China's eldercare services."

"But an examination of relevant policy documents suggests that the interest of Chinese authorities in this field is being driven by their desire for economic growth and manufacturing prowess, rather than a carefully considered evaluation of eldercare needs."

"Released back in 2015 [Made in China 2025], this was a comprehensive industrial plan to upgrade China's manufacturing capacities in fields including green vehicles, batteries, and robotics. Beijing viewed this exclusively through the lens of national security and economic development. The plan itself notes: 'Building an internationally competitive manufacturing industry is the only way for China to enhance its comprehensive national strength, safeguard national security and build a world power.' It makes no mention of China's demographic shifts, nor its aging population."

"All of this resembles the blueprint of an East Asian developmental state laser-focused on economic growth and technology, in which eldercare is valued more in terms of its market potential or ability to serve as a testing ground for new products.

This has deep parallels elsewhere in East Asia.

Back in 2007, Japan launched 'Innovation 25,' a long-term initiative to increase productivity and promote economic growth through investments in science and technology, including robotics (…) This led to both large-scale state investments in healthcare robots and a developing techno-utopian narrative in which robots would 'save' Japan from its looming demographic challenges."

"But the reality has been far different. Both Japan and South Korea (currently the world leader in industrial robots), have found themselves forced to rely on steadily rising levels of migrant workers to meet their demands for labor, particularly in eldercare."

"The risk is that China will repeat the mistakes of its East Asian neighbors, in pursuing high-tech solutions that serve the interests of industrial planners and business interests, while overlooking China's growing needs for human caregivers, particularly in impoverished and depopulated rural areas."

Carl Minzner (2025): "China's Industrial Policy Drives Boom in Eldercare Robots", 28 May 2025
https://www.cfr.org/blog/chinas-industrial-policy-drives-boom-eldercare-robots

China, inversión tecnológica y consumo doméstico

"2025 marks the conclusion of China's 14th Five-Year Plan, a time for policymakers to present their scorecard and set goals for the next five years. To ensure a positive outcome, Chinese leaders will likely roll out active stimulus measures in the spring while continue pursuing self-sufficiency and technological advancement.

President Trump's threat of steep tariffs is not the most significant challenge for Chinese economic policymakers. If Beijing can leverage rising tariffs to push domestic reform and increase household consumption, it can sustain balanced growth despite short-term pains. Even so, Beijing's consumption-promotion measures will not sacrifice investment in strategic sectors. Chinese President Xi remains convinced that achieving self-reliance and technological advancement can heal economic woes, shake off the 'Century of Humiliation,' and enshrine him as a paramount leader.

The real challenge for Chinese policymakers lies at home. While they have experience designing and implementing industrial policies, they struggle to mobilize Chinese consumers to spend to drive growth. Without fixing public pessimism about the economy, direct household cash handouts are unlikely to spur household spending over saving. Beijing's biggest challenge is restoring policy credibility and market confidence."

"But people are not easily fooled. Tactical policy modification without strategic reorientation towards balanced economic growth will do little to boost confidence.

The Central Economic Work Conference in December 2024 correctly called for expanding domestic demand by boosting domestic consumption, improving investment efficiency, and increasing pension and medical insurance subsidies. Yet this, at most, supplements the existing playbook of prioritizing investment in digital industrialization and strategic technologies. The party's requrest for 'early planning for major projects' for the 15th FY Plan signals its unwavering prioritization of technology advancement, not household consumption."

"President Xi has called for 'strengthening top-down coordination' and 'disciplining local governments and corporate behavior.' If this optimizes investment and reduces excess capacity, it could rebalance the economy towards consumption and ease trade tensions. However, if centralization stifles local initiatives and entrepreneurial spirit, it may lead to prolonged economic slowdown.

Beijing is unlikely to abandon its existing playbook unless President Trump and President Xi (…) strike a grand bargain to restore China's access to advanced Western technology. Washington's export controls raise the cost and delay Beijing's technology progress, incentivizing Beijing to double down on its pursuit of self-sufficiency at the expense of supporting households. In a slower-growth environment, Chinese policymakers have fewer resources to spare when the party prioritizes technological advancement so as to not yield ground in the great power competition."

Zongyuan Zoe Liu (2025): "Rebalancing China's Economy: Stimulus, Confidence, and Self-Sufficiency", 23 Ene 2025

https://www.cfr.org/blog/rebalancing-chinas-economy-stimulus-confidence-and-self-sufficiency

"Mientras Estados Unidos, Taiwán y Países Bajos tejen el triángulo de hierro que domina la inteligencia artificial —Nvidia, TSMC, ASML—, Pekín queda fuera (…) Y lo más grave: no hay verdad. Porque en China, cuando no se puede crear, se miente."

"El gran salto hacia adelante de China en semiconductores empezó como suelen empezar los delirios de grandeza: con un plan central. En 2014, el Consejo de Estado anunció el National IC

Industry Development Guidelines, una hoja de ruta para convertir al país en potencia en semiconductores antes de 2030. Diez años más tarde, no logró ni un nodo de vanguardia. A pesar de una inversión de más de 150.000 millones de dólares entre subsidios directos, créditos fiscales y fondos de inversión semiestatales, la autarquía sigue siendo un espejismo."

"SMIC, la empresa insignia, nunca pudo fabricar de forma sostenida chips menores a 7 nanómetros. El intento más publicitado fue en 2022, cuando afirmaron haber producido un chip de 7nm sin EUV. Pero nunca mostraron volúmenes, ni benchmarks, ni clientes. Fue más un anuncio que un producto. A los pocos meses, desapareció del mapa. Exactamente como los chips 'cuánticos' de Baidu, los procesadores 'nacionales' de Phytium, o el famoso caso del superordenador de Sugon, que funcionaba en teoría, pero nunca fue validado por terceros. Todo promesas."

"Deepin, Loongson, Phytium: la inteligencia artificial sin cerebro

Los casos que mejor ilustran el autoengaño chino no son inventos puntuales, sino una secuencia de fracasos disfrazados de innovación. La empresa Phytium, por ejemplo, fue presentada como el futuro de la computación local, con procesadores ARM de diseño propio. Lo cierto es que jamás superó el rendimiento de un Snapdragon, de Qualcomm, de gama media."

"Otro ejemplo es Loongson, que durante años prometió una arquitectura nacional capaz de reemplazar a Intel y AMD. Recibió fondos estatales, tuvo presencia en ferias y fue elogiada como emblema de la 'autosuficiencia'. Pero sus chips apenas alcanzan niveles de rendimiento equivalentes a los Core i3 de hace 10 años, no tienen soporte de software actualizado, y no cumplen los estándares mínimos para servidores ni inteligencia artificial."

"En el plano del software, el caso de Deepin expone otro tipo de mentira: la del sistema operativo nacional. Presentado como una alternativa china a Windows, fue incluido en oficinas estatales y promocionado como desarrollo propio. Luego se descubrió que era simplemente una versión modificada de Debian."

"… lo más frecuente es el uso encubierto de chips extranjeros. Empresas que presentan modelos de IA entrenados 'localmente', pero que corren en placas Nvidia A100 o H100 traídas de contrabando (…) En los papeles, todo es chino, en el silicio, todo es estadounidense.

Todo eso en un contexto donde los grandes actores globales siguen corriendo. TSMC ya está en 2nm, Samsung también. ASML vende tecnología EUV, o de litografía de ultravioleta extremo, ya en su segunda generación. Esto habilita nuevas generaciones de chips. Nvidia produce semiconductores para agentes autónomos. Intel, incluso en su crisis, logra hacer 3nm en Ohio. China, mientras tanto, recicla comunicados de 2019."

"China no solo carece de chips avanzados: carece de las condiciones mínimas para producirlos. No tiene acceso a maquinaria de litografía de ultravioleta extremo (EUV), que sólo fabrica ASML en los Países Bajos, bajo control de exportación supervisado por Estados Unidos. Tampoco tiene herramientas clave de inspección, deposición o grabado, que proveen empresas como Applied Materials o Tokyo Electron."

"Y si no hay herramientas, tampoco hay conocimiento. Las universidades chinas producen miles de ingenieros al año, pero ninguno con experiencia real en integración de procesos de vanguardia. La

mayoría trabajan en proyectos repetitivos, en institutos de diseño, o migrando a empresas extranjeras. Los pocos que tienen talento acaban fichados por TSMC o Samsung. La fuga de cerebros es constante."

"A diferencia de Japón, que cayó por exceso de confianza pero nunca mintió sobre lo que tenía, China adopta la falsificación como recurso sistemático. Cada vez que no alcanza un objetivo, lo reemplaza con un anuncio. Cada vez que no consigue una patente, fabrica una portada. Cada vez que una empresa fracasa, crea una nueva con otro nombre."

"El 'Plan 2030' ya no menciona litografía. El Made in China 2025 quedó congelado en papeles que nadie cita. Los fondos soberanos que invirtieron en startups de chips ahora encubren las pérdidas con fusiones opacas."

https://www.elnacional.cat/oneconomia/es/economia/china-imperio-nunca-fue-mentiras-dragon-sobre-semiconductores-i_1487801_102.html

Cómo conseguir un rápido desarrollo económico

"… there are three critical interventions that governments can use to speed up economic development. Where these interventions have been employed most effectively in east Asia –in Japan, South Korea, Taiwan and now China– they have produced the quickest progressions from poverty to wealth that the world has seen. When, by contrast, other east Asian states have set off with the same ambitions and equal or better endowments, but have not followed the same policies, they have achieved fast growth for a period but the progress has proved to be unsustainable."

"The first intervention –and the most overlooked– is to maximise output from agriculture, which employs the vast majority of people in poor countries. Successful east Asian states have shown that the way to do this is to restructure agriculture as highly labour-intensive household farming –a slightly larger-scale form of gardening. This makes use of all available labour in a poor economy and pushes up yields and output to the highest possible levels, albeit on the basis of tiny gains per person employed. The overall result is an initial productive surplus that primes demand for goods and services.

The second intervention –in many respects, a second 'stage'– is to direct investment and entrepreneurs towards manufacturing. This is because manufacturing industry makes the most effective use of the limited productive skills of the workforce of a developing economy, as workers begin to migrate out of agriculture. Relatively unskilled labourers create value in factories by working with machines that can be easily purchased on the world market. In addition, in east Asia successful governments pioneered new ways to promote accelerated technological upgrading in manufacturing through subsidies that were conditioned on export performance. This combination of subsidy and what I call 'export discipline' took the pace of industrialisation to a level never before seen.

Finally, interventions in the financial sector to focus capital on intensive, small-scale agriculture and on manufacturing development provide the third key to accelerated economic transformation. The state's role is to keep money targeted at a development strategy that produces the fastest possible

technological learning, and hence the promise of high future profits, rather than on short-term returns and individual consumption. This tends to pit the state against many businessmen, and also against consumers, who have shorter strategic horizons."

"What the Asian crisis clarified was that a consistent set of government policy interventions had indeed made the difference between long-run success and failure in economic development in east Asia. In Japan, Korea, Taiwan and China, governments radically restructured agriculture after the Second World War, focused their modernisation efforts on manufacturing, and made their financial systems slaves to these two objectives. They thereby changed the structures of their economies in a manner that made it all but impossible to return to an earlier stage of development. In the south-east Asian states [Malaysia, Indonesia, Thailand] –despite their long periods of impressive growth– governments did not fundamentally reorganise agriculture, did not create globally competitive manufacturing firms, and did accept bad advice from already rich countries to open up financial sectors at an early stage. The Japanese economist Yoshihara Kunio had warned in the 1980s that south-east Asian states risked becoming 'technology-less' developing nations. This is exactly what happened, and they slid backwards when their investment funds dried up. In short, different policy choices created – and will probably further widen – a developmental gulf in the Asian region."

"In the boom years of the 1980s and 1990s, the failure to generate indigenous manufacturing and technological capacity was hidden by the arrival of high levels of foreign direct investment, much of it concentrated on processing operations within quite advanced manufacturing sectors. With the onset of the Asian crisis, however, the industrial difference between south-east and north-east Asia became starkly apparent. South-east Asia has almost no popularly recognisable, globally competitive manufacturing companies."

"In south-east Asia, countries were blessed with high levels of savings in their banking systems just as in north-east Asia. But governments directed the hefty investments this made possible to the wrong ends – to lower-yield, large-scale agriculture, and to companies that were either not focused on manufacturing or only on manufacturing for protected domestic markets. South-east Asian states then made their developmental prospects even worse by following rich country advice to deregulate banking, to open up other financial markets, and to lift capital controls."

"Premature financial deregulation in south-east Asia led to a proliferation of family-business-controlled banks which did nothing to support exportable manufacturing and which indulged in vast amounts of illegal related-party lending. It was a story of banks being captured by narrow, private sector interests whose aims were almost completely unaligned with those of national economic development. The process was one which has also been observed in Latin America and, more recently, in Russia."

Studwell, Joe (2013): *How Asia works. Success and failure in the world's most dynamic region*, Grove Press, New York.

El éxito de Corea del Sur

En la década de 1950, Corea era uno de los países más pobres del mundo. Actualmente se encuentra entre los más ricos (con un PIB per cápita superior al

de España). Pero Corea no triunfó por ajustarse a la ideología del libre mercado. Más bien, el 'milagro' económico coreano se basó en: (1) impulsar ciertas industrias nuevas mediante el apoyo gubernamental, de acuerdo con un plan nacional de desarrollo, hasta que estuvieran preparadas para afrontar la competencia internacional; (2) el control gubernamental de todos los bancos para regular un elemento fundamental de la actividad empresarial: el crédito; (3) la realización de grandes proyectos por parte de empresas estatales (como la siderúrgica POSCO); (4) el control de las divisas y la inversión extranjera. En suma, "The Korean economic miracle was the result of a clever and pragmatic mixture of market incentives and state direction. The Korean government did not vanquish the market as the communist states did. However, it did not have blind faith in the free market either".

Chang, Ha-Joon (2008): *Bad samaritans. The myth of free trade and the secret history of capitalism*, Bloomsbury Press, New York