

ARTICLE

A Return of Industrial Policies? Only a Partial and Dystopic One

Giovanni Dosi

The Network Law Review is pleased to present a special issue on “Industrial Policy and Competitiveness,” prepared in collaboration with the International Center for Law & Economics (ICLE). This issue gathers leading scholars to explore a central question: What are the boundaries between competition and industrial policy?

Abstract: This article, an abridged version of much more detailed analyses in Dosi et al. (2025) and Dosi (2025), addresses three interrelated questions, namely: back to the basics, what are industrial policies? Granted that, is a new return of industrial policies actually in the making? And finally, what is there to be done? I argue that current “industrial policies” fall well short of any public intervention which (a) defines the boundaries between the activities left to the market and those belonging to the State; (b) shapes the rates and directions of innovation and investments; and (c) is an instrument for achieving broad socio-economic goals. Rather, a beggar-thy-neighbour perspective underlies most current trade policies, proposed to regain countries’ productive competitiveness at the expense of others, possibly sold under the objectives of “security.” If industrial policies continue to be just means to rejuvenate a single country’s economic position against the rest of the world, they will clearly miss the objective of tackling the global polycrises we are facing.

This intervention, an abridged version of much more detailed analyses in Dosi et al. (2025) and Dosi (2025), addresses three interrelated questions, namely: back to the basics, what are industrial policies? Granted that, is a new return of industrial policies actually in the making? And finally, what is there to be done?

Let us adopt here a very expansive definition of industrial policies, grounded in a ‘developmental’ perspective, wherein policies are a crucial propeller of socio-

economic transformation (see Chang (2002), Cimoli, Dosi and Stiglitz (2009), and Wade (1990)).

First, industrial policies and related institutional architectures determine the boundaries between market and non-market forms of organisation, and the ensuing provisions of public vs. private goods and services.

Second, they define the governance structures shaping the rate and direction of learning and accumulation of capabilities and productive capacities.

Third, they have, or should have, the potential to address more than one objective, and particularly to conjugate technological and social goals.

The first two pillars are discussed in Cimoli et al. (2009), but it is urgent to extend their scope to the third one, in order to address the governance of the global commons, including our natural environment and global health. Let us start with the first pillar, which is the definition of the boundaries between market and non-market activities, pinpointing what can be privately produced and exchanged and what cannot be. Together with the what, this pillar includes the definition also of the who, that is, the actors involved. With respect to the “what”, that might concern strategic goods, such as military ones, and public services such as education, healthcare, and justice. Regarding the “who”, Cimoli et al. (2009) discuss the role of non-market institutions in providing non-marketable goods and services, establishing also the activities whose marketisation is deemed as ineffective or socially undesirable. Such institutions also limit and constrain the behaviour of private actors or, putting it in Amsden and Singh’s (1994) language, such institutions discipline capital and, more generally, private economic motives.

A crucial domain that public institutions have protected until recently from market intrusions has been the scientific commons, as Paul David puts it (see, among other contributions, David (2004) and the discussion in Coriat et al. (2025)). That is, they have protected Open Science and the pursuit of curiosity-driven search, and with that the expansion of the “endless frontier” of knowledge (Bush, 1945), upon which also the major technological innovations over the last centuries have flourished. Moreover, public programs fostering research and development in many “strategic sectors”, such as the biomedical and the information-processing ones, have added to the pool of general “open” knowledge even when such programs come under the second pillar, namely the governance of the rates and directions of technological learning. Exemplary cases are the role of public programs in fostering research and development in many strategic sectors, such as biomedical, pharmaceutical, and health. Similarly, the role of public actors has been strategically relevant in the construction of heavy transport goods such as ships and aircraft. Another domain where public actors have played until recently a paramount role has been the

provision of infrastructure and networks of coordination, such as the Internet – originally MILNET, a network constructed by the US military for communication emergencies – and the Web, which rests upon a breakthrough innovation at CERN. Last but not least, public institutions act to prevent potential self-cannibalisation driven by unbridled profit-seeking behaviours, and together create and influence the structure of market relations, even when the distribution of production and property rights mostly pertains to private actors (on the potential socio-economic destructiveness of markets when left to themselves, see the insightful discussion in Hirschman, 1982).

The second pillar of industrial policies concerns the governance of the accumulation of technological knowledge. In principle, knowledge, rather than a “good”, shows many traits of a common. It has the attributes of being non-rival and non-excludable and together bears the characteristics of a common (Hardin, 2013): it is a human-generated resource based on individual and collective cognition and driven by search and problem-solving heuristics, which serve many serendipitous purposes. As such, its generation and use entail extreme increasing-returns properties (Arrow, 1996, and Dosi, 2023). Contrary to the traditional “tragedy of the commons”, supposedly due to overuse lacking property rights, the threat knowledge faces is its over-appropriation (Heller and Eisenberg, 1998, and Boyle, 2017), both via legal barriers to its own generation and use, and other forms of private appropriation – as a corollary of its partly tacit nature (Dosi, 2023). Knowledge should be seen as a *primus inter pares* among the drivers of growth and development. Its generation displays typically varying balances between public and private sources, conditional on the characteristics of different technological paradigms and different historical phases. However, precisely the (partial) appropriability of knowledge by profit-seeking actors makes for the endemic possibility of divergence between the rate and direction of knowledge accumulation (or lack of it), which private actors left to themselves would undertake, and those which society would like to pursue. In that, industrial policies enter as instruments able to foster and nurture the creation of national systems of innovation and to direct accumulation of both knowledge and production capacity (Freeman, 1995). Industrial policies have deep historical roots in the early construction of the whole socio-economic fabric of industrial society, particularly in their development phase. This applies to the USA and Germany in the 19th century, and later on Japan, South Korea, all the way to contemporary China. More on industrial policies and development, as mentioned, in Chang (2002), Cimoli, Dosi and Stiglitz (2009).

It happens that industrial policies, whether called as such or not, are also crucial in the development and diffusion of new technological paradigms, which often are at the core of novel phases of economic growth. This is particularly the case in the last hundred years or so, with public missions which have led to knowledge accumulation

(Mazzucato, 2021), most often involving military and space objectives (e.g. the Manhattan Project, the Apollo Program, etc.). But here comes the (possible) third pillar, which is the capacity of industrial policies to address societal challenges. Let us go back to the original Nelson (1977) question: why have industrial policies, and the institutions involved in their attainment, been successful in sending humans to the moon but not in solving societal problems, in primis social injustice, showing a persistent lack of capabilities able to address the ghetto problem? As Nelson (2011) puts it:

“If we can land a man on the moon, why can’t we solve the problems of the ghetto? ... In an economy with such vast resources and powerful technologies, why can’t we educate ghetto kids, provide medical care at reasonable cost to all that need it, keep the streets, air, and water clean, keep down crime, provide decent and low-cost mass transport, halt the rise in housing and services costs...” (Nelson, 2011, p. 376).

Nowadays, one witnesses the return of some reference to industrial policies, after having been banned as a bad word for decades. But are they really, at least in the foregoing definition?

In our view, they are far from it.

Indeed, the current mainstream definition of industrial policies is much narrower and shallower than ours, in that they represent “any type of selective government intervention or policy that attempts to alter the structure of production in favour of sectors that are expected to offer better prospects for economic growth in a way that would not occur in the absence of such intervention in the market equilibrium” (Pack and Saggi, 2006, pp. 267–268). In fact, a recent IMF report (Evenett et al., 2024) considers subsidies, tariffs, or quotas among the main forms of industrial policy.

Actually, a beggar-thy-neighbour perspective underlies most current trade policies, proposed to regain countries’ productive competitiveness at the expense of others, possibly sold under the objectives of “trade security”. If industrial policies continue to be just means to rejuvenate a single country’s economic position against the rest of the world, they will clearly miss the objective of tackling the global-scale polycrises we are facing.

Given the increasing tendencies towards protectionism and nationalism, muscular competition, and wars, there are paths alternative to militarism and techno-feudalism, well beyond neo-liberal globalisation. (These notions are discussed at length in Dosi and Virgillito, 2019, and Dosi, 2025). Note that, in fact, hyper-globalisation had dramatic detrimental effects on within-country inequalities in terms of accelerated deindustrialisation (Dosi et al., 2021), income losses for the

working class (Riccio et al., 2025), and weakening of democratic systems (Rodrik, 2011). As such, it is one of the major causes of the backlash toward protectionism and trade wars.

Things in the other foregoing domains are hardly better.

Until the 1980s, activities in domains like health and education were considered, at least in Europe, as concerning the fulfilment of universal rights rather than providing (marketable) goods and services. Of course, all was not a bed of roses. Nature continued to be considered—indeed at an accelerating rate—just “a source of raw materials and a sink for human waste” (Brock & Taylor, 2005). And, last but not least, the “moon vs. the ghetto” problem continued to be there with its dramatic strength. Still, the power of politics somewhat curbed the disruptive power of the unbridled pursuit of profits. Soon thereafter, however, markets (that is, capitalists old and new) came back with a vengeance. What had been universal rights—at least at national levels—such as health, education, and welfare became goods to be privatised and turned into a major source of rents (Dosi et al., 2024). Intellectual Property Rights (IPRs) increasingly expanded their domain, massively infiltrating the domain of open science too.

Pharmaceuticals, which we analyse at length in the study by Dosi et al. (2023), is an excellent case in point. The very history of the pharmaceutical industry highlights that there is no necessary link between the profits/rents accruing to monopoly capitalists and rates of innovation, and even less so between the latter and the appropriation of knowledge via patents. In recent decades, a tightening of IPRs has been associated with a lower number of breakthrough innovations. On the contrary, the explosion in patenting activity does not map into any corresponding growth in innovative activity (we discuss the evidence in Dosi et al., 2023). Pharma patents have increasingly constituted legal barriers to protect intellectual monopolies rather than an incentive and a reward to innovative efforts. This would be also a major domain for industrial policies. However, they have been and are missing, as the ‘privatisation’ of the policy response to the COVID-19 emergency dramatically illustrates (more in Dosi, 2021).

The environmental emergency is exploding, possibly beyond the tipping point of a major catastrophe, but the (timid) attempts to address it have been largely put in the hands of those who were responsible for it in the first place: current “industrial policies” are market-friendly measures which largely benefit existing corporate interests of big oil, big tech, asset managers, and military conglomerates. A bit like putting Count Dracula in charge of blood donations...

So what is to be done?

Now, more than ever, it is urgent to reorient industrial policies addressing the protection and provision of global commons, namely knowledge, nature, health, and equality. The ghettos of the world, after forty years of neoliberal order, are sharply multiplying. The adverse effects of climate change are already manifesting at an unprecedented speed. Facing all that, one cannot just think of curbing the damages humanity is creating while continuing the overexploitation of nature. In a context progressively marked by global tensions and the “naturalisation of wars”, conflicts, and genocides, business as usual means that the probability of global catastrophes massively increases.

Alternative routes exist which, in our view, focus on the provision and preservation of global commons and the redefinition of the beneficiaries of “industrial policies” writ large – taking the focus away from the carriers to the moon or, worse, rearmament, and addressing instead primarily socially beneficial objectives, ranging from, e.g., oncological drugs, truly clean energy sources – such as green hydrogen – all the way to the alleviation of poverty and the ghettos.

Giovanni Dosi

Giovanni Dosi is a Professor of Economics and Director of the Institute of Economics at the Scuola Superiore Sant’Anna in Pisa, co-director of the “Industrial Policy” and “Intellectual Property Rights” task forces at the Initiative for Policy Dialogue, and Continental European Editor of the journal *Industrial and Corporate Change*

References

1. Amsden, A. H. (1991). Diffusion of development: The late-industrializing model and greater East Asia. *The American Economic Review*, 81(2), 282–286.
2. Amsden, A. H., & Singh, A. (1994). The optimal degree of competition and dynamic efficiency in Japan and Korea. *European Economic Review*, 38(3–4), 941–951.
3. Boyle, J. (2017). The second enclosure movement and the construction of the public domain. In *Copyright Law* (pp. 63–104). London, Routledge.
4. Brock, W., & Taylor, M. S. (2005). Economic growth and the environment: A review of theory and empirics. In P. Aghion & S. Durlauf (Eds.), *Handbook of Economic Growth*, Volume 1, Part B (pp. 1749–1821). Elsevier, Chap. 28.
5. Bush, V. (1945). *Science, The Endless Frontier*. Washington, National Science Foundation.

6. Cherif, R., & Hasanov, F. (2019). The return of the policy that shall not be named: Principles of industrial policy. IMF Working Paper WP/19/74, International Monetary Fund.
7. Cherif, R., & Hasanov, F. (2021). Industrial policy against pandemics. *Industrial and Corporate Change*.
8. Cimoli, M., Dosi, G., & Stiglitz, J. E. (2009). *Industrial Policy and Development: The Political Economy of Capabilities Accumulation*. Oxford University Press.
9. Cimoli, M., Dosi, G., Nelson, R., & Stiglitz, J. E. (2009). Institutions and policies shaping industrial development: An introductory note. In Cimoli, M., Dosi, G., & Stiglitz, J. E. (Eds.), *Industrial Policy and Development: The Political Economy of Capabilities Accumulation*. Oxford University Press.
10. Chang, H. J. (2002). *Kicking Away the Ladder: Development Strategy in Historical Perspective*. London, Anthem Press.
11. Coriat, B., Orsi, F., & Weinstein, O. (2025). The Open Science, Paul David, and the Commons. *Industrial and Corporate Change*, forthcoming.
12. David, P. A. (2004). Can 'open science' be protected from the evolving regime of intellectual property right protection? *Journal of Institutional and Theoretical Economics*, 160(1), 9–34.
13. Dosi, G. (1984). *Technical Change and Industrial Transformation: The Theory and an Application to the Semiconductor Industry*. London, Macmillan.
14. Dosi, G. (2021). Policy lessons from medical responses to the COVID-19 crisis. *Intereconomics*.
15. Dosi, G. (2023). *The Foundations of Complex Evolving Economies: Part One – Innovation, Organization, and Industrial Dynamics*. Oxford University Press.
16. Dosi, G. (2025). The path toward the abyss: The dissolution of the old social pact, the emergence of new technologies, and the challenges for progressive policies. *European Journal of Economics and Economic Policies*.
17. Dosi, G., & Virgillito, M. E. (2019). Whither the evolution of the contemporary social fabric? New technologies and old socio-economic trends. *International Labour Review*, 158(4), 593–625.
18. Dosi, G., Riccio, F., & Virgillito, M. E. (2021). Varieties of deindustrialization and patterns of diversification: Why microchips are not potato chips. *Structural Change and Economic Dynamics*, 57, 182–202.
19. Dosi, G., Marengo, L., Staccioli, J., & Virgillito, M. E. (2023). Big pharma and monopoly capitalism: A long-term view. *Structural Change and Economic Dynamics*, 65, 15–35.
20. Dosi, G., Fanti, L., & Virgillito, M. E. (2024). Attributes and trends of rentified capitalism. *Italian Economic Journal*, 10, 435–457.

21. Dosi, G., Cresti, L., Riccio, F., & Virgillito, M. E. (2025). Industrial policies for global commons: Why it is time to think of the ghetto rather than of the moon. *Journal of Industrial and Business Economics*.
22. Evenett, S., Jakubik, A., Martín, F., & Ruta, M. (2024). The return of industrial policy in data. *IMF Working Paper*.
23. Freeman, C. (1995). The ‘national system of innovation’ in historical perspective. *Cambridge Journal of Economics*, 19(1), 5–24.
24. Hardin, G. (2013). The tragedy of the commons. *Environmental Ethics*, 185–196.
25. Heller, M., & Eisenberg, R. (1998). Can patents deter innovation? The anti-commons in biomedical research. *Science*, 280, 698–701.
26. Hirsch, F. (1976). *Social Limits to Growth*. Harvard University Press.
27. Hirschman, A. O. (1982). Rival interpretations of market society: Civilizing, destructive, or feeble? *Journal of Economic Literature*, 20(4), 1463–1484.
28. Mazzucato, M. (2013). *The Entrepreneurial State: Debunking Public vs. Private Sector Myths*. London and New York, Anthem Press.
29. Mazzucato, M. (2021). *Mission Economy: A Moonshot Guide to Changing Capitalism*. Allen Lane.
30. Mazzucato, M., & Rodrik, D. (2023). Industrial policy with conditionalities: A taxonomy and sample cases. *UCL Institute for Innovation and Public Purpose Working Paper Series (IIPP WP 2023-07)*.
31. Nelson, R. R. (1959). The simple economics of basic scientific research. *Journal of Political Economy*, 67(3), 297–306.
32. Nelson, R. R. (Ed.) (1962). *The Rate and Direction of Inventive Activity*. Princeton University Press.
33. Nelson, R. R. (1977). *The Moon and the Ghetto: An Essay on Public Policy Analysis*. New York, Norton.
34. Nelson, R. R. (2011). The Moon and the Ghetto revisited. *Science and Public Policy*, 38(9), 681–690.
35. Pack, H., & Saggi, K. (2006). Is there a case for industrial policy? A critical survey. *The World Bank Research Observer*, 21(2), 267–297.
36. Riccio, F., Dosi, G., & Virgillito, M. E. (2025). Functional specialisation and income distribution along global value chains. *Economic Systems Research*, 37(1), 116–147.
37. Rodrik, D. (2011). *The Globalization Paradox: Why Global Markets, States, and Democracy Can’t Coexist*. Oxford University Press.
38. Rodrik, D. (2014). Green industrial policy. *Oxford Review of Economic Policy*, 30(3), 469–491.
39. Rodrik, D. (2024). Reimagining the global economic order. *Review of Keynesian Economics*, 12(3), 396–407.

40. Shonfield, A. (1965). *Modern Capitalism: The Changing Balance of Public and Private Power*. Oxford University Press.
41. Wade, R. H. (1990). *Governing the Market: Economic Theory and the Role of Government in East Asia's Industrialization*. Princeton University Press.