

## THE ROLE OF INDUSTRIAL POLICY IN DEVELOPING COUNTRIES

*Robert H. Wade*

### **Abstract**

*The voices raised against “industrial policy” in the economics profession have long achieved a choral force. However, historical evidence suggests that the public authorities of virtually all of the small number of non-western economies that achieved “developed” economic status in the past two centuries have used industrial policy to impart directional thrust aimed at catching up with western economies. Since the 2007–2008 financial crash and ensuing long slump, minds have become somewhat more open to this evidence as the realization dawns that western countries themselves have to restructure their production structure beyond the limits of “let the market decide”.*

*This chapter argues that the classic developmental State is only viable today for a very small number of countries with large domestic markets. However, a variant of the developmental State can still be viable. The chapter spells out necessary features of the encompassing political settlement and the industrial policy agency itself. It ends on the note that developing country policy makers should be cautious about accepting mainstream economists’ blanket negatives about industrial policy.*

### **Introduction**

The voices gathered against “industrial policy” in the economics profession have long achieved a choral force. For Nobel laureate Gary Becker, “the best industrial policy is none at all” (1985). For John Williamson, crystallizer of the Washington Consensus about appropriate development policy, “little in the record of industrial policy suggests that the state is very good at ‘picking winners’” (2012: 10). For Lawrence Summers, former chief economist of the World Bank, Treasury Secretary of the United States, presently professor of economics at Harvard, government “is a crappy VC [venture capitalist]” (quoted in Nocera 2011). For *The Economist* magazine, “the government has a terrible record of picking winners” (2011).

For William Easterly, ex-World Bank economist and currently professor of economics at New York University, “[t]he track record of dictators picking winners is very poor, so why are we so sure that this factor contributed to the success of the Gang of Four [East Asian tigers]?” (2009: 129). An interviewer pressed him on how he reconciled his faith in free markets with evidence that the typical developing country had better economic performance in the 1960s and 1970s, when governments intervened more, compared to later, when governments intervened less: “It is a bit of a *mystery* why they did well ... the growth had a lot of *mystery* for me ... It is *mysterious* to those who advocate hands-off markets.” (Easterly, 2002: 91, emphasis added).

By this time, Easterly had been analysing development issues for 21 years, most of them in the World Bank.

In short, the choral force says that “industrial policy” is “government picking winners”; and everyone knows that governments cannot pick winners.

However, since the Great Western Recession starting in 2007–2008, industrial policy has enjoyed something of a renaissance. Prominent development economists (including Ha-Joon Chang, Ricardo Hausmann, Justin Yifu Lin, Mariana Mazzucato, Dani Rodrik and Joseph Stiglitz) write about it in at least partly positive terms, with their arguments eliciting a more respectful response within policy circles than before. Lin’s advocacy is significant, because he was chief economist and senior vice president at the World Bank from 2008 to 2012, which gave him an institutional platform for disseminating ideas. The Organisation for Economic Co-operation and Development (OECD) published a flagship report with “industrial policies” in the title, *Perspectives on Global Development 2013: Industrial Policies in a Changing World* (2013). UNCTAD and the ILO published *Transforming Economies: Making Industrial Policy Work for Growth, Jobs and Development* (2014, edited by Salazar-Xirinachs et al.). The United Nations Industrial Development Organization (UNIDO) now makes “inclusive and sustainable industrial development” its banner headline and organizes industrial policy promotion events. Mariana Mazzucato’s *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (2013) became a widely reviewed best-seller, translated into six European languages so far and top of Amazon’s “economic policy” list for six months, with sales of around 10 000 (as of mid-2014).

This chapter begins by summarising reasons for the recent – apparent – re-legitimation of industrial policy in section one. Section two discusses the scope today for a developmental State à la France, Japan, the Republic of Korea, Taiwan Province of China and Brazil of the post-war decades. Section three outlines a recent debate about how a government should identify priority industries or products, particularly concerning the extent to which it should only target activities *within* the economy’s current comparative advantage. Section four turns to organizational issues: the political and organizational features that make for high capacity to implement industrial policy at the level of State-society relations and the level of particular agencies. Section five concludes on the

future of industrial policy, with some suggestions and cautions for developing country policymakers.

Before proceeding, it is necessary to raise three points about the larger context of industrial policy. First, the past two centuries since the Industrial Revolution show, on the one hand, a dramatic Great Escape from lives that were “nasty, brutish and short”, borrowing Thomas Hobbes’ phrase (Deaton, 2013). On the other hand, the number of *non-western* economies that have become developed in the two centuries since the Industrial Revolution is less than ten, even stretching the categories of “non-western”, “economies” and “developed”. The list plausibly includes Japan, the Russian Federation, Taiwan Province of China, the Republic of Korea, Hong Kong (China), Singapore, Israel and maybe Mauritius. Such a low total suggests that strong forces operating at the level of the world economy hold “developing” countries back, analogous to gravity, and that the vast “development industry” created since the Second World War can hardly be classed a success. The non-western success stories had or have two conditions in common: first, external State enemies capable of conquering the territory; and second, a public authority imparting more directional thrust than is consistent with neoclassical development prescriptions (with Hong Kong (China) being a partial exception to the second condition).

This finding should induce caution about accepting the Washington Consensus agenda for developing countries (privatize-free trade-deregulate-no industrial policy), even though, according to John Williamson, it reflects the beliefs of “all serious economists”.

Second, industrial policy – understood as targeted efforts to change the production structure of an economy in order to accelerate economic development, so it should more accurately be called “production transformation policy” – is an “inner wheel” whose effects depend on “outer wheels” of macroeconomic conditions and underlying political settlements.

Macroeconomic conditions refer especially to the exchange rate. Standard comparative advantage theory assumes that when economies specialize and trade on the basis of comparative advantage (produce and export products whose opportunity costs are lower compared to other products that might be produced in the same economy and import the rest of the consumption bundle), welfare will be maximized and trading economies will all gain from trade. The freer

the trade, the greater the welfare gains, compared to no trade. The theory assumes that trade is balanced, with no payments surpluses or deficits, although the mechanisms of balance are unclear. A cousin of the standard theory (the purchasing power parity theory of exchange rates) says that the balance comes from the exchange rate moving to ensure that the price of a good in two countries is the same when expressed in a common currency. This means that producers in the relatively most efficient country will specialize in the good and others will import it. Accordingly, the exchange rate adjusts to reflect relative cost differences, which signal the appropriate specialization.

However, this is a fanciful picture of how exchange rates move in the real world. They not only move in response to trade flows but also in response to (often much greater) volatile capital flows, and can go in quite the wrong direction for balancing trade flows – and for helping a country’s emerging industries to compete internationally (see Frenkel and Rapetti chapter, this volume). The exchange rate is commonly as important a determinant of growth and the structure of production and trade as the dense array of international trade and investment rules. However, the literature on how to do industrial policy tends – wrongly – to treat the exchange rate as belonging to another policy realm.

Political settlements, the second kind of “outer wheel”, refer to institutional balances between the State, business and labour, as well as between rival parties or groups contending for control of the State. Political settlements affect the extent to which “business”, “politicians”, “police”, “judges” and “Church” are unconstrained in their (collusive) control over society, the extent of “rule by law” rather than “rule of law”, the extent to which labour movements limit the power of business and the extent to which the State ties industrial policy assistance to performance conditions. Political settlements affect wages, income distribution and domestic demand, as well as the State’s ability to raise broad-based taxes and use the revenues for financing public goods, as distinct from private goods or goods with which to keep others out of power.

The third contextual factor is limits to growth, especially environmental limits. Any discussion of the economic growth and catch-up of developing countries has to acknowledge that endless growth on a finite planet is impossible – short of revolutionary changes in technology.

For the most part, this essay takes these points as given and focuses on debates around industrial policy more narrowly construed.

## **I. The return of industrial policy?**

Let us consider why industrial policy is currently receiving attention in the spirit of how to do it better rather than how to do it less. There are several reasons.

First, the Great Recession and median income stagnation in the western world (more than six years old at the time of writing) has dented the widespread confidence in the idea that “free markets” and “small States” are best for all.

Second, recent research shows that – contrary to widespread understanding – the Government of the United States has been vigorously undertaking a form of selective industrial policy for several decades, especially since the 1990s. Agencies such as the Defence Advanced Research Project Agency,

National Institutes of Health, National Institute of Standards and Technology and the Central Intelligence Agency have taken the initiative to create and steer knowledge-pooling networks, linking (a) firms that otherwise compete with each other, (b) sources of finance and (c) universities, public labs and private labs. This form of industrial policy of the United States has escaped public attention, partly because there is no superordinate “industrial policy agency” akin to Japan’s Ministry of International Trade and Industry (MITI) in the post-war decades, as well as because the agencies have tried to keep their network-building and direction-setting programmes below the radar of conservative public attention (Wade, 2014b; Mazzucato, 2013; Lind, 2012; Block and Keller, 2011; Schrank and Whitford, 2009).

The contradiction between the fact of vigorous industrial policy in the United States – where State agencies are active in helping to pick (or more accurately, make) winners – and the general understanding that the United States does not do industrial policy prompts the quip that the most successful United States industrial policy is to persuade the world that the United States does not do industrial policy.

A third reason for the recent attention to industrial policy is the dramatic fall in the growth rates of “emerging economies” after 2010, which dented confidence that their high growth rates from 2003 to 2010 would be sustained long into the future, powering a catch-up to developed countries. The fall in emerging economy growth rates is another fact that helps to open minds to the potential for industrial policy to spur production diversification and upgrading. In the new situation, people devote more attention to the previously little noticed trend: in the period from 1980 to the early-2000s, the majority of middle-income countries in Latin America, sub-Saharan Africa, Middle East and North Africa and South Asia *fell behind the West* in relative average income, whereas more of them had raised their per capita incomes relative to the capitalist core in 1960–1980, during the era of supposedly bad “import-substituting industrialization” (Wade, 2003a; 2014a). The later falling behind occurred while many of these economies were under “structural adjustment programmes” of the World Bank and similar organizations, whose content derives from the Washington Consensus. After the 2008 Crash, people became more willing to notice evidence that structural adjustment and Lawrence Summers’ “three -ations” (privatization, stabilization, liberalization) were not so favourable a foundation for development as they had been led to believe.

Fourth, there is accumulating evidence that many upper middle-income countries that might be first in line to graduate to developed economy status are stuck in a “middle-income trap” (see Kanchoochat chapter, this volume). While this has become a popular phrase, it hides an important distinction between a middle-income trap and a middle capabilities trap. Even when a middle-income country converges upwards in income (thanks to high prices for commodity exports), it may be stuck in a capabilities trap. For example, its non-natural-resource-based firms may find that – with the exchange rate buoyed up by the commodity exports – they cannot compete with firms producing standardized products in lower-wage countries, as well as being unable to compete with

firms producing more technology-intensive goods and services in higher-wage countries (Paus, 2012; 2014).

The notion that much of Latin America might be stuck in the capabilities trap is suggested by the dramatic fall in the region’s ratio of regional manufacturing value-added to regional GDP, from 26 per cent in 1980 to 16 per cent in 2009 (East Asia’s equivalent figure is over 30 per cent) (World Bank, 2014). Chinese- and German-made intermediate and final goods were in evidence everywhere at Brazil’s World Cup venues in June–July 2014.

Some evidence suggests that even the South-East Asian economies are no longer advancing in high value-added manufacturing activities. True, Malaysia, Thailand, and Indonesia experienced deep structural change out of natural resources and into manufacturing after the mid-1970s, especially in electronics, electrical engineering, textiles and autos, building up production and management skills to match the productivity levels of developed countries in standardized products. No other developing countries beyond North-East Asia have experienced such growth of manufacturing capacities.

Nonetheless, in contrast to Taiwan Province of China and the Republic of Korea at the equivalent stage of development, not even the wealthiest – Malaysia – has built an indigenous capacity to design, innovate and commercialize into new and more profitable sectors, while few firms have created even regional brand names. All of them remain heavily dependent on subsidiaries of multinational corporations (TNCs) for their higher-tech manufacturing exports. Most importantly, backward links from TNC operations into the domestic economy are thin, with the result that domestic value-added in manufacturing remains low.

Indeed, as China advances – dense backward links from TNC operations to domestically-owned firms, including firms operating in lower-wage western China – it is leap-frogging the South-East Asian economies, putting them under even stronger competitive pressure (see Yang in volume 2 of this publication).

A recent study of Malaysia finds that real wages declined in 2002–2008, while the average skill intensity of production also declined. It concludes:

Malaysian industry appears to be *sliding down* the technological slope, and the incentives for

workers to improve their skills are weakening... technological capabilities are relatively static (and may even be declining)... industrial competitiveness is marking time (Yusuf and Nabeshima, 2009: 26, emphasis added).

Worried about being caught in the middle-income or capabilities trap, Governments of middle-

income countries have become more willing to challenge the long-standing argument of mainstream economics and the World Bank, namely that “the best industrial policy is none at all.”

The above circumstances and evidence have helped to make discussion of industrial policy partially respectable.

## II. The developmental State Mark II

The classic developmental State focused on developing the capacities of *indigenous firms across a broad range of major global industries*, capable of acting as first-tier suppliers to TNCs and even competing head-to-head with them. Today, only a few economies with very large internal markets – China, India and Brazil most obviously – have this as an option. High entry barriers in the face of existing TNC dominance and neoclassically-inspired trade and investment rules make such an objective non-viable for most (Pirie, 2013).

However, if the developmental State Mark I (where the capitalist State leads the creation of a diversified and autonomous industrial base) is now only viable for very large developing countries, this is not the end of the story; rather, there is scope for developmental State Mark II.

First, World Trade Organization (WTO) rules are more constraining for some policy instruments than for others: more constraining for tariffs, quantitative restrictions, local content requirements; medium constraining for government procurement, intellectual property, export subsidies in agriculture; and least constraining for devaluations, investment incentives, trade finance and export taxes, for example.

Second, the State can act more – or less – strategically in attracting selected portions of global value chains into its territory. It can bargain hard with a TNC to maximize the transfer of skills into the heads of citizens, or it can let the corporation decide by itself how many citizens to employ in which stages of which operations. Throughout the fast catch-up phase, the public authorities of the Republic of Korea and Taiwan Province of China bargained hard with

incoming TNCs, in a way that public authorities in many other developing countries (Chile and Hong Kong (China), for two) did not.<sup>1</sup> Indeed, some studies argue that policymakers in the Republic of Korea and Taiwan Province of China continue to practice activist industrial policy, even as they keep their interventions much more covert than in the past.<sup>2</sup>

In other words, the leaders of a State may buy into the prevailing liberal ideology that they can best promote development by improving the institutional and physical framework for markets, in the hope that, *having made a level playing field in line with the World Bank's criteria (as in its Doing Business reports), the players will turn up to play*. Accordingly, private profit-seeking investors – domestic and foreign – responding to incremental price signals, will diversify and upgrade production sufficiently to keep incomes rising. Alternatively, the leaders of the State can use the remaining room for policy manoeuvre to promote non-incremental jumps in the product and technology space, in the spirit of developmental State Mark II. In countries as varied as Argentina, Nigeria, Thailand and the United Kingdom, State leaders *could* still today undertake entrepreneurial roles,<sup>3</sup> even accepting that anything like the developmental States of East Asia of the post-war decades – building up indigenously-controlled major industrial sectors in cars, chemicals, petrochemicals and electronics – is unlikely (Wade, 1990; 2003a; 2003b).

Indeed, new evidence suggests that since 2008 and the long slump, many developed and developing country States – whatever they say – have moved further away from “level playing field” policies and intensified *policy selectivity* by sector, location and ownership. This is the finding of Vinod Aggarwal and

Simon Evenett (2010), who draw upon the Global Trade Alert data set for the United States, major EU countries, Argentina, Brazil China, India and others. Much of the resulting “industrial policy” (although generally not called that) is directed at “green” products and processes, which softens neoclassical censure (albeit not as much as “military” does). States have generally avoided tariffs and quantitative restrictions (which, as noted, are in the “more constrained” category of WTO rules). They have employed modes subject to “medium” or “low” WTO restraint, such as public procurement, discriminatory subsidies and bailouts (“murky protection”).

In short, the quantum of industrial policy has gone up since 2008, especially for green investments. WTO rules have affected the *composition* of industrial policy instruments, rather than curbing the *quantum*.

The developmental State Mark II is all the more important for the many middle-income countries

that find themselves in the squeeze described earlier, where their producers cannot compete with low-wage countries in standard goods and do not have capabilities to compete in exports of skill- and knowledge-intensive goods and services. China’s position as the workshop of the world across a wide range of manufactured products (more accurately, the assembly workshop of the world, drawing upon parts and components produced elsewhere, particularly in regional value chains spanning East and South-East Asia) intensifies the squeeze on others. Across swathes of manufacturing, China has enjoyed absolute – not just relative – cost advantages over producers elsewhere, while its exports have been knocking out manufacturing employment in both middle- and high-income countries. The idea that governments should hew to neoclassical principles in response to this competitive squeeze and limit themselves to investing in the basic ingredients of State fiscal and legal capacity, as well as leaving the outcome to the Invisible Hand mechanism, is – to put it politely – debatable.

### III. “New structural economics” and industrial policy

Justin Yifu Lin, chief economist at the World Bank from 2008 to 2012, is a leading proponent of “new structural economics”. He argues, first, that market prices give signals for *incremental* change, but can block larger economic diversification and innovation. Second, governments can usefully push or incentivize firms to diversify and upgrade their production, giving more encouragement to some activities ahead of others. Third, government efforts should remain within the economy’s *existing* comparative advantage, because firms operating within existing comparative advantage are more likely to attain and sustain private profitability (and not depend on continued government support). Fourth, comparative advantage itself will evolve over time as endowments change. Accordingly, investing in line with today’s comparative advantage alters tomorrow’s endowment structure, which alters tomorrow’s comparative advantage and permits sustainable (because privately profitable) production diversification and upgrading relative to today.

The underlying image is of a vast, continuously improving Toyota-style production system in which different products have different growth potential and opportunities and constraints are identified *as they emerge over time*. Learning and self-discovery by actors – private and public – are central.

Lin calls his approach the “comparative-advantage-following” strategy, in contrast to the “comparative-advantage-defying” strategy. He spells out five operational steps for a specific country (Lin, 2010; 2012):

- (1) Government identifies a list of goods and services produced over the previous two decades in dynamically growing countries with similar endowment structures and average GDP 100 per cent higher.
- (2) Among the resulting list, government gives priority to those products that some domestic

private firms have already started to produce, and helps remove obstacles to their growth and upgrading. For products not locally produced, government could adopt specific measures to attract firms in higher-income countries to invest in these industries.

- (3) Government should pay attention to private enterprises' independent discoveries of successful products that are not included in the list, as well as providing support to scale up those industries.
- (4) In developing countries with poor infrastructure and unfriendly business environment, government can invest in industrial parks or export processing zones and make improvements to attract domestic private firms and/or foreign firms willing to invest in the targeted industries.
- (5) Government should give limited incentives for domestic firms or foreign investors that work within the list of products in step (1) to compensate them for the *public* knowledge created by their private investments.

Lin stresses that targeted public support must be confined to activities *within* the economy's existing comparative advantage. This is a useful defence against the standard accusation that any sectorally targeted support amounts to "government picking winners". However, he has been reluctant to identify criteria for distinguishing investments within and without the economy's existing comparative advantage.

For example, the Cambridge University-based economist Ha-Joon Chang, born in the Republic of Korea, emphasizes more than Lin that what an economy produces today determines the skill and comparative advantage of tomorrow – an effect that is external to private decision making and "undersupplied" if resource allocation is left to private agents.

Chang argues that Japan's push into steel, autos, ships and the like in the late-1950s and early-1960s, when its per capita income was only 19 per cent that of the United States (1961, at market exchange rates), was beyond its existing comparative advantage. The same applies for the Republic of Korea's push into heavy and chemical industries in the late-1960s, when its per capita income was only 6 per cent that of the United States, as well as its push into semiconductors in 1983, when its per capita income was still only 14 per cent that of the United States.

On the face of it, these combinations of products and relative average income suggest that Japan and the Republic of Korea invested heavily in products far above their existing comparative advantage (for example, far above the products being produced in countries with average income twice theirs at the time, in line with Lin's step one).

Lin replied that these moves were indeed *within* the country's comparative advantage at the time. In the Republic of Korea, POSCO, the giant State-owned steel company established in 1968 against strong World Bank advice, which soon became the most efficient maker of basic steel products in the world: "[B]uilt upon the success of development in garments, wigs, footwear, and other labour-intensive industries..., [the Republic of] Korea accumulated capital and the capital intensity of its endowment structure increased. From the perspective of the comparative-advantage-following strategy, the upgrading of a few firms into more capital-intensive industries became a necessity".

Lin continued: "Industries such as steel production and shipbuilding were among the most advanced industries globally in the nineteenth century, but by the mid-twentieth century they no longer held this leading-edge position... Investments in these mature industries required a large amount of capital, compared with traditional labour-intensive industries, but their capital intensities were much lower than in the emergent industries. It is therefore not surprising that, with some government support for overcoming the difficulty of mobilising a large amount of capital in an economy with an underdeveloped financial sector, these industries are viable in an economy that have achieved or are approaching lower-middle-income status" (Lin and Chang, 2009: 499).

However, Lin's argument smacks of tautology: the fact that Japan and the Republic of Korea succeeded in the given industries means that those industries with those technologies *must have been* within their existing comparative advantage. More generally, the principle that industrial policy should remain within existing comparative advantage seems to advise a Stone-Age economy trading with an information and communication technology economy to continue specialising in the production of stone-intensive products as though this is the optimal equilibrium (Salazar-Xirinachs and Nubler, 2010; Wade 2014c).

The debate between Lin and Chang leaves unmentioned a surprising fact: we know little about how East Asian industrial policymakers – in Japan and Taiwan Province of China from the 1950s, the Republic of Korea from the 1960s – went about identifying priority sectors or priority firms and changing support for the targeted industries and firms over time.

My own research on East Asian industrial policy identified two modes of targeted public support (Wade, 1990; 2003a): first, “government leadership”, where the government allocates public resources to industries where the private sector is not willing to invest on its own; and second, “government followership”, where the government comes in to underwrite *some* of the bets that the private sector has already made or would be prepared to make on its own. An example of followership is the work of Taiwan Province of China’s Industrial Development Bureau in its role as an industrial extension service (parallel to an agricultural extension service). Its employees (about 150 by the early-1980s, mostly engineers) visited factories up and down the country at frequent intervals, and among other things kept nudging owners and managers to rearrange the production line, buy a new kind of machine tool, upgrade quality, diversify products, link up with subsidiaries of TNCs producing in Taiwan Province of China and hunt out export markets. They kept a close eye on parts and components being imported by big foreign firms or firms of Taiwan Province of China, and looked for promising opportunities to “persuade” big firms to switch their sources of supply from imports

to domestic producers, without having to take too great a hit in price or quality. They regarded import replacement and export promotion as “two wings of the same bird”. Of course, the same bureau was also involved in promoting the “big lump” investments in upstream sectors, as were apex bodies like the Council for Economic Planning and Development and the Science and Technology Advisory Board.

Over time in any one sector, one can trace periods of “leadership” and “followership” in various sequences, as well as the default mode of no targeted support at all. In terms of this distinction, “followership” is close to Lin’s advocacy of government support for activities within the economy’s current comparative advantage, while “leadership” is close to Chang’s advocacy of public support for investments beyond current comparative advantage. We can think of government “leadership” as like “stretching” comparative advantage, in an analogy with a rubber membrane.

What is missing from their arguments is the point just made, namely that over time in any one sector one should see movement between the three modes; for example, an initial period of “government leadership” in one sector may give way to more limited support for private sector initiatives (“followership”) and then to no targeted support. Moreover, what is missing from Lin, but not from Chang, is the recognition that trade protection may be a justified instrument of followership and leadership, especially where State fiscal capacity to raise broad-based taxes is relatively low.

## IV. Political and organizational determinants of industrial policy

The literature tends to concentrate on what the State should do, using which instruments, whereas it tends to leave unexamined the determinants of State effectiveness (Devlin and Moguillansky, 2011, is a useful exception). We can think of these at two levels: first, the macro level of State-society relations and the political settlements behind them referred to earlier; and second, the more micro level of State agencies, in particular, industrial policy agencies.

### A. State-society relations

In terms of the first, a State executive has a broad choice between (a) building generic State capacity (fiscal, legal, bureaucratic, military) or (b) building specific State capacity to redistribute resources to itself and its group at the expense of would-be incumbents, using legal subterfuge, repression or violence to exclude opponents. Where the State lacks

experience of constitutional constraints and democratic accountability, electoral victors are more likely to follow the second route and adopt winners-take-all strategies, shutting out the opposition and governing as they see fit. Few States of this kind have been able to mount effective industrial policies. Most of the exceptions (China is one) have sustained enough State discipline to provide public goods (as well as redistributive goods) because they see themselves facing powerful external enemies, whose existence induces internal solidarity and acquiescence. On the other hand, where the State operates in conjunction with a cohesive capitalist class, the prospects for effective industrial policy are considerably improved.

The short answer to why the East Asian capitalist developmental States took the form they did is that (a) their societies faced external State-based enemies capable of overwhelming the whole society, and (b) the owners and managers of capital faced episodes of labour militancy early on. The famed “embedded autonomy” of the East Asian developmental State came out of co-determination between external military threats, State fiscal, legal and bureaucratic capacity, as well as State constraints on capital and especially labour (Evans, 1995).

## **B. Making effective industrial policy bureaucracies**

*The Politics of Public Sector Performance: Pockets of Excellence in Developing Countries*, edited by Michael Roll (2014), uses an inductive approach to identify characteristics of State agencies that distinguish themselves from the surrounding bureaucratic swamp by being effective in carrying out their mission. The case studies range across Brazil (the National Development Bank), Nigeria (National Agency for Food and Drug Administration and Control), Surinam (State Oil Company), mainland China before 1949 (Sino-Foreign Salt Inspectorate), Taiwan Province of China after 1949 (Joint Commission for Rural Reconstruction) and State-owned enterprises in rentier States. From these case studies, Roll induces several necessary (but not sufficient) conditions for “pockets of effectiveness”.

The first condition is a strong head of government (or a small, coherent elite), which has strong commitment to particular tasks – like industrial diversification and upgrading – being done effectively.

His or her motives may be defence against external enemies, national prestige or international prestige.

Second, the head of government breaks with normal – patronage – appointment criteria, possibly against a lot of elite opposition. Instead, criteria for appointment to top positions in the agency emphasize technical qualifications, proven leadership and proven incorruptibility. The agency director or chief executive officer (CEO) comes from *outside* the inner elite and is connected to it through “weak ties”. This makes the CEO less vulnerable to the *insider’s dilemma*: the insider head of an agency is under pressure to allocate jobs, contracts and other public resources to other members of the elite network, or risk their own career and effectiveness from insider attacks; but stuffing the agency with officials recruited on patronage networks is likely to render the agency ineffective, which can also risk the CEO’s career.

Therefore, prior to the appointment, the tie between the CEO-to-be and the president is a weak one; they usually do not know each other well, because the candidate comes from outside the inner elite. However, once selected, the third necessary condition – the link between the CEO and the president – must become a *strong* one, because the CEO heavily depends on the president’s support to defend him/her against the established elite’s attacks. However, the link to the rest of the elite remains *weak*.

Fourth, the strong tie to the head of government helps to secure the necessary bureaucratic autonomy – necessary because the agency will often conflict with politicians and firms with contrary interests (e.g. firms wanting continued protection despite non-performance). However, autonomy does not mean separation or no contact, and it is not fixed and based on law. Paradoxically, *autonomy depends on political connections and is inherently relational*. Agency managers must constantly manipulate their external environment to secure their autonomy, using connections to politicians, corporations, unions and other powerful entities.

Fifth, the director must be free to appoint members to the management teams and select staff who are committed to the mission (“principled agents”), most of whom come from outside political elite networks (some from private companies or overseas). Salaries and benefits are higher than in the regular civil service. However, the ethos of the agency is such

that performance does not mainly depend on extrinsic incentives (money); rather, staff work conscientiously mainly due to *intrinsic* incentives, because they see their job as meaningful for national development. Intrinsic motivation helps agency effectiveness because it reduces the director's costs of controlling staff. In the language of principal-agent analysis, it reduces the principal's cost of controlling agents.

Sixth, an agency that aims to be a “pocket of effectiveness” in a bureaucratic swamp must change

internal and external expectations of the agency's *modus operandi*. The key instruments are (1) standardization of procedures (for example, procedures for project appraisals and project decisions) and (2) regular evaluations of agency performance. In relations with the outside, the standardization of procedures enhances predictability for clients and reduces the incentives for bribes. In relations within the agency, standardization raises staff confidence in the information they receive from others, rendering it unnecessary for them to check it for themselves.

## V. The future of industrial policy

Many advanced and developing countries are worried about the erosion of manufacturing in the face of Chinese competition, many middle-income countries are worried about being stuck in the middle-income trap, many lower-income countries are worried about being stuck as commodity exporters, running faster to stand still, while many governments – developed and developing – are trying to target investment in “green” industries.

These trends have helped to rekindle a broad interest in industrial policy, and national strategy more generally, in developing countries. The arrival of China as a major “aid” donor and foreign investor in Africa, Latin America, and other parts of the developing world has forced recognition in host governments that if they are not to repeat their earlier failure to set the terms of engagement with western “aid” and foreign investment, they must formulate national development strategies and ensure that Chinese investment meets their own development agenda, rather than just China's.

Several prominent development economists have started to make the academic field bubble. Some of the recent writing suggests flaws in the earlier evidence used to discredit sectoral industrial policy, drawing attention to previously neglected soft-meso forms of industrial policy (such as the United States form described earlier). Other development specialists have focused on the important question of how to constrain politicians and officials to provide services (including industrial policy) that meet a national interest test rather than a sectarian interest test (Besley and Persson, 2011).

Some middle-income countries' governments draw inspiration from East Asian experience and have been trying to use their growing voice in multilateral development banks to change norms in favour of doing industrial policy better, rather than simply less (Wade, 2011).

It is often said that the rules of the international economic order constitute a significant constraint on effective industrial policy; indeed, it is true that WTO rules make a large part of East Asia's earlier development interventions actionable or illegal (Wade, 2003b). Here, however, the neglected distinction between hard and soft industrial policy – or leadership and followership – is important, because most of what the WTO makes actionable or illegal is towards the hard end of the spectrum (protection, subsidies, quantitative import restrictions and the like).

Developing country governments should exploit this policy space, even as they try to modify the larger framework of rules to allow more use of harder measures. They should recognize that although the East Asian, French and Brazilian developmental State of the post-war decades is not a viable option today (except perhaps in a few of the largest developing countries), this is not the end of the story; rather, scope remains for the developmental State Mark II.

However, we should not underestimate the forces arranged against any more positive role of government. Economics as a discipline has failed to produce positive theories that match the pervasive role of the State in most economies, as distinct from theories (such as those of James Buchanan and

George Stigler) that show the State as self-serving and predatory, while the same theories give private firms a largely free pass. The failure reflects an ideological idea of the good society embedded in the DNA of the neoclassical discipline, in which the government's appropriate role is to protect free markets and "fix" occasional market failure when the Invisible Hand does not produce satisfactory results. The operating procedures and loan conditions of western-run organizations like the World Bank institutionalize the idea of the free market as the optimal resource allocation mechanism.

Indeed, efforts to promote the idea of industrial policy in international organizations have encountered strong resistance from within the staff, as well as from member States. When Justin Yifu Lin was chief economist of the World Bank, only one vice president showed an interest in trying to put his ideas on industrial policy into modest practice, in the form of several pilot projects under the name "Competitive Industries program". For all that Lin insisted on the orthodoxy of his approach (industrial policy should only assist activities within the economy's existing comparative advantage, not stretch it), Lin himself admits that during his time as chief economist less than 10 per cent of World Bank economists were sympathetic to his arguments (personal communication, 2010). Under Lin's successor, the chief economist's complex "is mainly run these days by a Director of Development Policy who strongly opposes any form of active government strategy" (personal communication, July 2014). In the operations complex, the new Senior Director most relevant to continuing the Competitive Industries programme closed it down on the grounds that "she understands industrial policy only as the failed import-substitution

policies implemented in Latin America in the 1960s". Therefore, post-Lin, the World Bank has played little part in the new interest in industrial policy.

In the case of the OECD and its *Perspectives on Global Development 2013: Industrial Policies in a Changing World*, several of the staff of seven delegated to produce the report made it clear that they doubted the wisdom of industrial policy. Senior OECD managers kept asking, "are we really sure the OECD should endorse industrial policy?" (personal communication, 2013).

As for UNIDO, its big push for Inclusive and Sustainable Industrial Development is a kind of gamble for resurrection. As big western States have terminated or are terminating their membership of UNIDO, it faces a budget crisis and appointed a Chinese national as director-general in 2013 in the hope that China will be able to elicit more buy-in from developing countries and avoid staff cuts (such as those in UNDP, where about 20 per cent of its 5,000 staff have recently been made redundant). Industrial policy is the substance around which the organization is trying to elicit this buy-in from developing countries, even at the risk of further alienating western States that continue to say that industrial policy is a bad idea.

In short, developing country policymakers should be cautious about accepting economists' negative judgements about industrial policy, and doubly cautious about accepting politicians' negative judgements of the kind made by the former German Chancellor Helmut Schmidt, referring to national exercises in foresight, "people who have visions should see a doctor".

## Notes

- 1 Enos and Park (1988) report that in the 1970s, when the public authorities of the Republic of Korea, Chile and Hong Kong (China) ordered the same ethylene plant from Dow Chemicals, the Republic of Korea pressed Dow much harder to employ nationals across the several stages of the project; and the ratio of nationals to regular Dow employees increased in each of the two subsequent plants the Republic of Korea ordered from Dow. This case fits a motto heard in the Republic of Korea “we never learn anything twice” (Wade, 1982).
- 2 See Chu (2009), who argues: “In seeking to attain its development goals, the Korean state articulates visions and deploys public resources to structure the market and shape innovation”.
- 3 While even a State like the United Kingdom *could* undertake an entrepreneurial role, the December 2013 report of its House of Commons liaison committee about the future of the civil service identified a fundamental problem in the pervasive “belief in incremental change versus long-term vision” (Jenkins, 2013).

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