Industrial Policy and Development: A Political Economy Perspective

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This paper discusses the role of industrial policy in development, making five arguments. First, from a theoretical point of view, there are good grounds for believing that industrial policy can play an important role in promoting development. Second, there certainly are examples where industrial policy has played this role. Third, for every such example, there are others where industrial policy has been a failure and may even have impeded development. Fourth, the difference between these second and third cases rests in the politics of policy. Industrial policy has been successful when those with political power who have implemented the policy have either directly wished for industrialization to succeed or been forced to act in this way by the incentives generated by political institutions or the wider environment. These arguments imply that we need to stop thinking of normative industrial policy and instead begin to develop a satisfactory positive approach if we are ever to help poor countries to industrialize.

In this paper I discuss the role of industrial policy in development. I make five main arguments. First, from a theoretical point of view there are good grounds for believing that industrial policy can play an important role in promoting development. Second, there certainly are examples where industrial policy has played this role. Third, for every such example there are others where industrial policy has been a failure and may even have impeded development (though the counterfactual is complicated). Fourth, the difference between these second and third cases rests in the politics of policy. Industrial policy has been successful when those with political power who have

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Annual World Bank Conference on Development Economics 2010, Global

implemented the policy have either directly wished for industrialization to succeed or been forced to act in this way by the incentives generated by political institutions.

My fifth point, which is derived from the first four, is that economists and international institutions have to change the way they think about industrial policy. To promote industrialization in a society, we need a positive theory of policy. I use the term "political equilibrium" to refer to the concatenation of political forces that determines this policy outcome. It is the political equilibrium of a society that leads to particular policy choices. To give policy advice that would foster industry, one has to understand this political equilibrium and either attempt to change it or work within the environment it generates. This is a very different way of thinking about what industrial policy means.

Unfortunately, as things stand, while we have a good normative theory of industrial policy, we have a woefully inadequate positive theory, which can help to explain why industrial policy was adopted and apparently so successful in Taiwan, China, for example, and such a disaster in Ghana. It is toward building such a theory that research should focus, and without it, I argue, advocating industrial policy in the traditional sense as a solution to the problems of poor countries involves a large leap of faith.

Before delving into the consequences of industrial policy and my arguments in more detail, it is important to have some sort of definition of industrial policy. I take industrial policy to mean that the government deliberately attempts to promote industry. Nevertheless, there are many ways in which this can be done and many things that can count as industrial policy. These include tariff and trade policy (protection), tax relief, subsidies of various forms, export processing zones, and state ownership of industry. The way that Joseph Stalin promoted industrialization in the Soviet Union in the 1930s was completely different from the way that General Park Chung Hee did so in the Republic of Korea in the 1960s. Moreover, any of these policies may have promoted industrialization inadvertently, rather than deliberately. This is not an issue in the Soviet or Korean case, since the governments overtly committed themselves to industrialization. In other cases, however, it is not obvious whether or not industrialization occurred intentionally. One example would be the Calico Acts passed by the British Parliament in 1701 and 1721 with subsequent amendments. These acts raised prohibitive tariffs on cotton goods imported into Britain from India and even banned the wearing of garments made out of Indian fabrics (calicos). In fact, it was not until 1774 that the wearing of all cotton cloth was legal. By this time, of course, a vibrant British cotton industry had emerged. The traditional interpretation of these reforms rested on the notion that eighteenth-century British governments were laboring under the doctrine of "mercantilism"—an incorrect theory of how the economy worked. According to this view it took a revolution in ideas, induced by Adam Smith, among others, to lead to the final repeal of these acts in 1774. A more positive explanation for the introduction of these reforms was that they were advocated by the English wool and linen industries, which were suffering from Indian competition (Mokyr 1999, 50–51). Neither view suggests that there is any connection between the Calico Acts and industrialization. However, the Calico Acts, in conjuncture with the Statute of Monopolies of 1623, which made it more or less impossible to establish domestic monopolies in Britain, allowed the initially uncompetitive British cotton industry to develop without facing international competition. Although we do not know what would have happened in the absence of protection, it is obvious that the Calico Acts raised the return to investing in the cotton industry and may have played an important role in stimulating investment in the industry, which sparked the British industrial revolution.

Were the Calico Acts an industrial policy? If either of the first two views was correct, I would argue no: the stimulation of industrialization was an unintended by-product. Nevertheless, neither of these views provides a compelling understanding of economic policies after the Glorious Revolution in 1688. In fact, as Pincus (2009) convincingly shows, the Glorious Revolution was led by a Whig coalition that quite definitely and explicitly had the object of stimulating "manufactures"—in other words, industrializing. To this end the Whigs started the Bank of England, facilitated the development of the transportation sector via canals and turnpike roads, reorganized the tax system, and changed commercial policy. In fact, the Calico Acts were part of a vector of policies that constitute one of the world's most successful and most consequential industrial policies (the "mother of all industrial policies").

There are quite a few existing approaches to the role of industrial policy in the development literature. Early work during the 1940s and 1950s, by Rosenstein-Rodan, Myrdahl, Nurkse, Hirschman, and others, associated development with industrialization but argued that, due to various types of market failures, one could not expect this to happen automatically in poor countries. Hence, an important role for the government was to stimulate industrialization with an industrial policy. A particularly important subset of these ideas was due to the work of Singer and Prebisch emphasizing dynamic comparative advantage and the need to close the economy for some period to develop an internationally competitive industrial sector.

These ideas were part of mainstream development economics until they came under sustained attack from scholars with a public choice bent in the late 1970s and 1980s. Scholars such as Anne Krueger (1993) and Deepak Lal (1983), anticipated to a large extent by Peter Bauer, argued that industrial policy had not worked and indeed could not work because government failures were always worse than market failures. One should forget about industrial policy or, for that matter, any other policy intervention to solve problems of development and instead focus on creating free markets and a night watchman state. This literature was certainly correct in pointing to some very unsuccessful instances of industrial policy in developing countries. However, it was selective in its focus. Moreover, the theoretical argument that government failures are always worse than market failures seems more ideological than based on either theory or evidence.

Inevitably, therefore, this view did not remain convincing for long, even if it had a large impact on development agencies in the 1980s. The most damning evidence against it came from a series of important interpretations of the "East Asian miracle" economies by Johnson (1982), Amsden (1989), Wade (1990), and World Bank (1993). These works all put successful industrial policy at the heart of the postwar economic successes of Japan, Korea, and Taiwan, China, respectively. This research, and much more like it, stood the public choice view on its head, more or less arguing that market failures were always worse than government failures and that industrial policy was a powerful tool to promote economic growth. This interpretation of the East Asian experience heavily influenced the famous World Bank report in 1993.

Although the evidence in these studies is compelling, the evidence on unsuccessful industrial policy is equally compelling. This suggests that neither extreme view is correct. Industrial policy can sometimes work, but sometimes not. What distinguishes these cases? An obvious difference is that the type of industrial policy adopted in different cases was very different. In Latin America, for example, it came in the form of import substitution industrialization (ISI) with domestic markets closed to international competition. In Korea and Taiwan, China, the model was instead based on exports, with incentives created to induce the development of export industries (although it is also true that the domestic market was protected).

Why were such different strategies chosen to promote industry? As with the explanation for the Calico Acts, many scholars attribute this variation in policies to variations in ideas. Krueger (1993), for example, argues that Latin American countries were led by erroneous economic theories into adopting the ISI model. Possibly East Asian politicians had better (or maybe different and luckier) economic advisers than those who worked in Latin America. Ultimately, variation in the adoption and success of different industrial policies is explained by differences in the ideas and ideologies of different policy makers or their economists. Thus, Stalin had an industrial policy of a particular form because of his socialist ideology, while Mauritius had a successful export processing zone because Nobel Laureate Sir James Meade (1961) persuaded the governing Mauritius Labour Party that it was a good economic policy for the country.

An alternative approach to explaining variation in the success of industrial policy is set out in Rodrik (2007). Rodrik's basic argument is that industrial policy is potentially very powerful, but one size does not fit all. For promotion to be successful, development industrial policy has to be tailored to the specific context or institutions of a country or, to use the terminology introduced by Hausmann, Rodrik, and Velasco (2007), has to be sensitive to the "binding constraints." According to this view, different countries could adopt identical policies with very different results because they had different sets of market failures. Why would some countries adopt policies suited to their market failures and not others? The main reason concerns the binding constraints. Either Korea was very lucky in being able to understand this or it had (again) better economists who managed to understand this. Ghanaian industrial policy failed because some academic scribbler (actually Sir Arthur Lewis; see Lewis 1953) persuaded the government of Kwame Nkrumah to adopt an industrial policy that was not the right one, given Ghana's circumstances.

In this essay, I lay out a completely different way of thinking about the evidence on industrial policy. I agree that there are many market failures in the world, that there can be important externalities from having a thriving industrial sector, and that *potentially* industrial policy can be a powerful tool to promote rapid economic growth and development. I also believe that this was the case in Korea, Taiwan, China, and many of the other cases studied by the revisionists in the late 1980s. The balance of evidence suggests that these scholars were right to attribute a powerful causal role to industrial policy (though admittedly we have no definitive econometric evidence on this). However, I also believe that industrial policy can fail, as it did in Ghana in the 1960s and throughout Latin America from the 1940s onward. But the difference between these cases is not that the Japanese or the Koreans got lucky, were clever, or had better economists advising them; it was because the political equilibrium of these societies differed.

I argue that to begin to think properly about industrial policy, we need to start with a positive theory of such policy. It is remarkable the extent to which the economics literature on industrial policy has avoided proposing a positive theory of industrial policy as an equilibrium outcome. Take the reassessment of Soviet industrialization developed by Allen (2003). Allen argues that Stalin's industrialization policy was optimal in a poor country with bad initial institutions. There is no argument, however, that would lead us to expect that the Stalinist regime would adopt an efficient policy (indeed, a vast mass of evidence suggests that efficiency was not high on the criteria that Stalin's regime maximized; see Gregory and Harrison 2005). The normative approach to explaining policy assumes that politicians choose policy in a socially optimal way, something hard to believe about the Soviet Union in the 1920s and 1930s. Another striking example of this approach comes from the experience of policy reform in transition economies in the 1990s. While Russian reform was done badly, Chinese dual-track reform is characterized as clever (see Lau, Qian, and Roland 2000 for the argument that Chinese reforms were cleverer than Russia reforms). Of course, the Great Leap Forward during the 1950s is not viewed as clever, but as a big mistake. Although Shleifer and Treisman (2000) try to analyze Russian policy reforms as an equilibrium outcome, they still argue that they were (constrained) efficient. In fact, the evidence suggests that the reason that the Chinese did things differently than the Soviets was not because they were cleverer (see Shirk 1993; Naughton 2007). Chinese policy reform was an equilibrium outcome, as was Soviet reform. The fact that the transition policy differed was because, although both regimes may have been avowedly communist and (less avowedly) authoritarian, in fact the political equilibria in these societies were quite different. For example, the strength of the central state and the party was very different. The problem with industrial policy in Ghana in the 1960s was not that it was not clever or appropriate or needed, but rather that it was adopted in political circumstances where it had no chance of succeeding in actually industrializing the country.

To study any policy as an equilibrium outcome, to develop a positive theory of industrial policy, we need to understand the political economy. Variation in the adoption of industrial policy or in its success or failure has less to do with ideas or economists, although these can be important in particular circumstances, and much more to do with the nature of the political equilibrium in society—which interests are mobilized, what their interests are, what the political institutions are, and so forth. Understanding comparative policy is thus an exercise in comparative politics. This is a difficult exercise, and we are far from having a satisfactory framework that can explain policy and outcome variation, but we certainly will never have such a framework until we start thinking about the issues in the right way.

Political economy focuses on developing a positive explanation for industrial policy. Does this leave any room for "industrial policy" in a more traditional sense? My argument should make clear that I think the answer to this is no. The problem of underdevelopment cannot be solved by economists coming up with better policies for poor countries to adopt or endlessly hoping for benevolent "leadership." Economists have been proposing good policies for decades; the problem is that they are not adopted (just as poor countries do not adopt many of the other things that make countries rich, such as advanced technology). From my perspective, promoting industrialization—having an industrial policy—is an endogenous outcome of the political choices of a society. If interests and institutions are not aligned, then industry will not get promoted, whatever the normative consequences are. For outside economists or international institutions to stimulate industry, they have to take this into account. This means two things. First, it means trying to change the nature of the political equilibrium in a direction more conducive to industrialization, for example, by strengthening the political influence of those groups who would benefit from this. This may seem like a radical idea, but the World Bank has few reservations in adopting policies aimed at strengthening the power of poor people (for example, with an eye to generating more accountability and better service delivery). Second, it means holding the political equilibrium constant, trying to find a way of crafting a pro-industry policy that will be incentive compatible for those holding power.

The paper proceeds as follows. First I discuss the normative approach to industrial policy and examine what the evidence suggests about its effectiveness. I then emphasize that the differences between the successes and failures are mostly due to differences in political economy. A section then sketches what a positive political economy theory of industrial policy should look like, followed by an examination of what such a positive theory would imply for how we should rethink our understanding of industrial policy. A final section concludes.

Normative Industrial Policy

The welfare economics argument in favor of industrial policy is straightforward and well understood. It is quite likely that market imperfections, externalities, and increasing returns exist, which suggests that various forms of industrial policy could be welfare improving and even necessary to create a modern manufacturing sector. The optimal form of the policy will depend on the nature of the market imperfection. For example, if industry is too small relative to the social optimum because of imperfections in the capital market, this does not provide a normative motivation for infant industry protection. Rather, policy should be focused on removing the specific market failure (though, of course, one has to bear in mind the Theorem of the Second Best, which suggests that in an economy with multiple market failures, removing one of them may make welfare worse rather than better; Lancaster and Lipsey 1956–57). The simplest form of industrial policy—direct subsidies of industrial activity—would follow from welfare economics if industry generated positive externalities. In this case, a subsidy would be the canonical Pigouvian intervention. The choice of tariffs as the optimal intervention could arise in open economy models where industry again generates positive externalities and where international prices are such as to keep the industrial sector too small from a social point of view (as in the model of Matsuyama 1992). Nevertheless, a large literature has shown that even if one believes market failures are important, the actual policies chosen are rarely the ones that normative economic theory would predict—for example, inefficient instruments are used when efficient ones are available (see Coate and Morris 1995; Acemoglu and Robinson 2001). In this essay I leave this issue aside and simply observe that economic theory does provide a solid basis for believing that at least some forms of industrial policy can play a role in improving welfare and economic growth. In the next section I argue that there is evidence that this is indeed the case in practice. It should be obvious, however, that this type of theory does not provide a normative basis for many of the industrial policies we see, such as that adopted by the Soviet Union after 1928, although this is possibly the case under some very specific assumptions about the policy instruments available to the government.

The Experience of Industrial Policy

This section briefly discusses examples of failed and successful industrial policy. The main argument is not that industrial policy is always bad or always good. I believe, and I think the evidence suggests, that industrial policy has great potential to promote economic development. However, this potential can only be realized if the political environment is right. The examples are supposed to illustrate this perspective, which then is developed more systematically.

The poster children for those who advocate industrial policy are the East Asian "miracle" economies. A large literature documents this. Wade (1990, chs. 4–6) documents in great detail the case of Taiwan, China. There are many fascinating stories about how the government systematically intervened in the economy from the 1950s onward to promote industry. A famous one is how the government's chief economic planner K.Y. Lin decided on the basis of a report by a U.S. consultant, J. G. White Engineering Corporation, that plastics was a suitable industry to develop (Wade 1990, 80). He then identified Y. C. Wang, a local businessman, as someone with the resources to do this, apparently through bank records. He then told Wang to start the business! The first factory was built under government supervision and given to Wang in 1957. Wang, subsequently head of the Formosa Plastics Group, went on to become a leading entrepreneur in Taiwan, China. Wade provides many examples of how the government intervened to stimulate both the quantity and quality of industry—for example, publicly destroying 20,000 light bulbs in Taipei to discourage poor-quality production (Wade 1990, 81). Although the private sector was developed in Taiwan, China, the public sector was heavily involved in this industrialization drive, with as much as 60 percent of research and development expenditure attributed to the public sector in the 1980s (Wade 1990, 99) and a key role being played by the Industrial Policy Research Institute established in 1973. The institute played an important role in reducing technological dependence on the United States and launched "national strategic programs" in eight fields. The public sector introduced an export processing zone in 1965 and used many complementary instruments, such as credit, to stimulate exports (Wade 1990, 139–48). The government also started a large-scale integrated steel mill, as in Korea.

Figure 1, from Wade (1990, 111), sums up the periods in different industries where Wade judges that the state played a crucial role in leading particular industries. Some of these initiatives were not hugely successful. For example, unlike Japan or Korea, Taiwan, China, has not been able to develop an internationally competitive motor vehicle industry, despite a sustained attempt to do so. In other areas, such as semiconductors, these interventions have to be judged as very successful.

The evidence on the successful promotion of industry by the government in Taiwan, China, is impressive and convincing. This greatly bolsters the case for industrial policy. Unfortunately, however, there are many cases of unsuccessful industrial policy. Some of the best documented cases come from Sub-Saharan Africa. After independence many African countries adopted types of industrial policy, with some such as Ghana and Zambia announcing five-year plans and very ambitious targets. As in Taiwan, China, these programs were often led by the public sector. Unfortunately, in no Sub-Saharan African country did they generate an internationally competitive industry. Typically, while there was rapid capital accumulation, the industry that was developed was incredibly inefficient so that total factor productivity performance was abysmal.

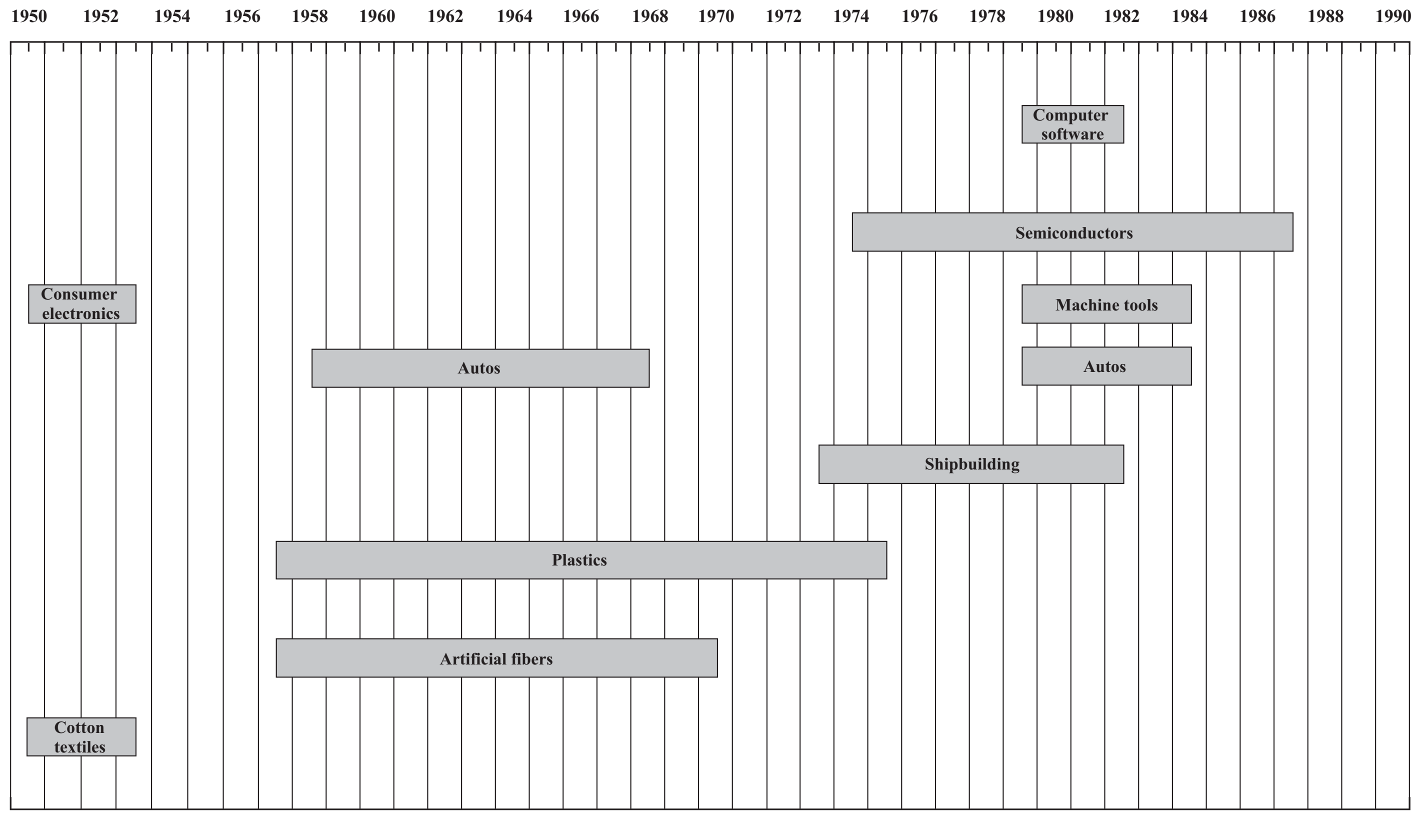
One of the most detailed studies of the failure of industrial policy in Africa is Tony Killick's seminal book about development in Ghana (Killick 1978). This should be required reading for anyone advocating industrial policy as a current solution to Africa's problems. He discusses in great detail examples of industrial projects from the early 1960s. He shows in case after case that cost-benefit calculations were ignored and inefficient investment projects were undertaken. One example was a cattle-based industrial complex (Killick 1978, 231):

> The footwear factory . . . would have linked the meat factory in the North through transportation of the hides to the South (for a distance of over 500 miles) to a tannery (now abandoned); the leather was to have been backhauled to the footwear factory in Kumasi, in the centre of the country and about 200 miles north of the tannery. Since the major footwear market is in the Accra metropolitan area, the shoes would then have to be transported an additional 200 miles back to the South.

Killick (1978, 231) remarks that this was an enterprise "whose viability was undermined by poor siting."

Another startling example is the construction of a fruit canning factory "for the production of mango products, for which there was recognized to be no local market

FIGURE 1.
State Leadership Episodes in Industries in Taiwan, China, 1950–90



Source: Wade 1990.

Note: The lines refer to big leadership. The dates should be taken as rough approximations. The diagram does not show all industries that have experienced big leadership, nor is it necessarily complete for the industries shown.

[and] which was said to exceed by some multiple the total world trade in such items" (Killick 1978, 229). The government's own report on this factory is worth quoting at some length (Killick 1978, 233):

> *Project.* A factory is to be erected at Wenchi, Brong Ahafo, to produce 7,000 tons of mangoes and 5,300 tons of tomatoes per annum. If average yields of crops in that area will be 5 tons per acre per annum for mangoes and 5 tons per acre for tomatoes, there should be 1,400 acres of mangoes and 1,060 acres of tomatoes in the field to supply the factory.
>
> *The Problem.* The present supply of mangoes in the area is from a few trees scattered in the bush and tomatoes are not grown on commercial scale, and so the production of these crops will have to start from scratch. Mangoes take 5–7 years from planting to start fruiting. How to obtain sufficient planting materials and to organize production of raw materials quickly become the major problems of this project.

Killick's acerbic comment is that "it is difficult to imagine a more damning commentary on the efficiency of project planning," stated a whole year before the factory was constructed. The problem under Nkrumah was not underinvestment in industry. Indeed, the consensus view is that the capital stock increased 80 percent between 1960 and 1965 (Killick 1978, 69), 60 percent of which was by the public sector (80 percent of nonresidential investment; Killick 1978, 170). The problem was in the way this investment was allocated.

It would be easy to present many pages of similar examples from Sub-Saharan Africa. Although the situation is less bad in Latin America, which has even had a few successes, particularly in Brazil, it is generally true that government stimulation of industry in Latin America has not been a success. Most government protection and subsidization of industry did not create internationally competitive firms; rather, it led to uncompetitive monopolies or oligopolies producing poor-quality goods for protected domestic markets.

The Political Economy of Success and Failure

What is the difference between the examples of the successful and unsuccessful industrial policy? Why did it work so well in Taiwan, China, but not in Ghana? Although there were certainly differences in the way that the policies were implemented (for example, inward looking versus outward looking), the main difference between these cases is political. After all, the Calico Acts seem to have been an example of successful import substitution, and one can argue that early import substitution in Taiwan, China, in the 1950s proved an important period that gave some subsequently dynamic firms a chance to get off the ground. So the strategy attempted, at least on paper, in Latin America and maybe even in Ghana could have worked. The fact that it did not was due to the politics of these countries.

To get a sense of my argument, let us return to Africa. Tangri (1999, 30) argues that the Industrial Development Corporation (INDECO) of Zambia failed to promote industrialization because

> INDECO was subject to a series of ad hoc political directives on specific operational issues, including type and location of investments. Projects were undertaken on political considerations, although, as in the case of Mansa batteries, the feasibility study concluded that the project based in Mansa would be uneconomic. Moreover, projects such as the Chinese maize mill at Chingola were started without any feasibility study being undertaken; the decision was a purely political one, which led to the already planned and evaluated maize mill in Kitwe being abandoned. Directives were also issued regarding the location of projects. The locations of the Livingstone Motor Assemblers, Kapiri Glass Products, and Mansa Batteries, all subsidiaries of INDECO, were decided on the basis of providing employment outside the main urban areas. These and similar projects ran into difficulties for various reasons, partly because, being located in up-country centers, they were situated a long way from the main markets. Multi-million-dollar brick factories were set up under official directive in the rural areas at Kalalushi and Nega Nega, but transporting the bricks long distances to the construction sites raised their costs to uneconomic levels, with the result that the construction industry switched to the use of concrete blocks. Because of the declining demand for its products, the brick works at Nega Nega was forced to close down in 1979 and the factory at Kalalushi incurred large losses.

Tangri's discussion of Zambian industrial policy suggests that the difference between INDECO and, say, Japan's Ministry of International Trade and Industry was that in Zambia the choice of policy, project, and location was driven by political criteria, not economic ones.

In Ghana, as in Zambia, the motivation behind decisions to misallocate resources was clearly political. Rimmer (1969, 195) argues, "Projects were begun without feasibility studies and without competitive tendering. New enterprises were distributed among party functionaries as private fiefs, enabling them to give patronage to relatives, friends, and supporters." Omaboe (1966, 460–61) concludes, "In Ghana the politicians are always ahead of the civil servants and planners in the general consideration and implementation of economic and social projects."

In contradistinction, all of the literature on the East Asian miracle emphasizes how the economic bureaucracy was allowed to develop rational economic policies without having to adopt politically motivated projects or instruments.

Positive Industrial Policy

So industrial policy can work, but it may not work. The difference lies in the objectives and functioning of the institutions implementing the policies, and these are determined by the political system. This seems to be a much more important source of variation in success and failure than other factors, such as differences in binding constraints or in ideas about what to do. To explain the successes and failures of industrial policy, we need to dig into these political factors. What was it about the politics of Taiwan, China, and the politics of Ghana that led to these outcomes? Why did their political equilibrium differ so much in ways that allowed one but not the other to implement a successful industrial policy? Important studies have addressed these questions, including Wade (1990), Haggard (1990), and Evans (1995).

To set the scene, I briefly discuss a theory of endogenous policy to give some background to my way of thinking about these issues (for an extensive discussion, see Acemoglu, Johnson, and Robinson 2005a). Economic policies (and more generally institutions that are usually also outcomes of collective choices) matter for economic growth because they shape the incentives of key economic actors in society; in particular, they influence investments in physical and human capital and technology and the organization of production. Economic policies determine not only the aggregate economic growth potential of the economy, but also the distribution of resources in the future. In other words, they influence not only the size of aggregate income, but also how income is divided among different groups and individuals in society.

Economic policies are endogenous and are determined as collective choices of the society. Clearly, there is no guarantee that all individuals and groups will prefer the same set of policies because, as noted, different policies lead to different income distributions. Consequently, there will be a conflict of interest over the choice of economic institutions. In such a situation it will be the distribution of political power in society that determines which institutions are chosen. The group with more political power will tend to secure the set of economic institutions that it prefers.

The distribution of political power in society is also endogenous, however. Following Acemoglu and Robinson (2006), I distinguish between two components of political power: de jure (institutional) and de facto. Here de jure political power refers to all types of power that originates from the political institutions in society. Political institutions determine the constraints on and the incentives of key actors in the political sphere. Examples of political institutions include the form of government—for example, democracy, dictatorship, or autocracy—and the extent of constraints on politicians and political elites. There is more to political power than political institutions, however. A group of individuals, even if they are not allocated power by political institutions (for example, as specified in the constitution) may nonetheless possess political power. Namely, they can revolt, use arms, hire mercenaries, co-opt the military, or use economically costly but largely peaceful protests in order to impose their wishes on society. I refer to this type of political power as de facto political power, which itself has two sources. First, it depends on the ability of the group in question to solve its collective action problem, that is, to ensure that people act together, even when any individual may have an incentive to free ride. Second, the de facto power of a group depends on its economic resources, which determine both its ability to use (or misuse) existing political institutions and also its option to hire and use force against different groups.

The composition of de facto and de jure power in society is what determines the actual power of a group or set of interests, and this will determine which economic policies arise. This vision emphasizes that those with power today take decisions not just to maximize their income today, but also to maintain their grip on power. These goals are often in contradiction. This can be for the simple reason that economic policies that increase the incomes of elites today may increase the incomes of opponents even more, thus influencing the future distribution of de facto power. It may also be that, as pointed out in the seminal study by Bates (1981), good economic policies are not good politics. In particular, although providing public goods may increase the incomes of the elite, staying in power may be better achieved by using redistributive instruments that can be targeted at supporters and withheld from opponents.

If the promotion of industry is the endogenous outcome of a political equilibrium, in what circumstances would the political equilibrium be likely to be propitious to it happening? If promoting industry was economically efficient in that it could create a Pareto improvement, then there is a sense in which any type of political system or any type of political leader might have an incentive to undertake it. Wittman (1989), for example, argues that in democracies political competition always leads to efficient policies. Nevertheless, Wittman's arguments are subject to forceful counterarguments (Acemoglu 2003), and they do not appear to be relevant to the mostly nondemocratic regimes I have been discussing so far. Whatever led to successful industrial policy in Taiwan, China, it was not domestic political competition, since the government was run by the Kuomintang more or less as a one-party state. Of course, if industrialization produced economic success and wealth, then even authoritarian regimes ought to be in favor of it. The problem with this argument is that industrialization will almost certainly undermine the political status quo, as it did in both Korea and Taiwan, China.

These arguments suggest that industrialization is unlikely to be promoted by those who stand to benefit indirectly from it. Nevertheless, the extent to which this is true will certainly depend on circumstances. For example, both Korea and Taiwan, China, because of their colonial experiences under Japanese rule, had extensive histories of industrialization. When their governments began to promote industry in the 1960s, there were entrepreneurs and experience. Both Singapore and Hong Kong, China, had long histories of mercantile capitalism. In addition, in Korea and Taiwan, China, an extensive bureaucratic tradition played a key role in adopting and monitoring the policies. The politicians had to allow them to do this, but the fact that this capacity existed clearly could have influenced the probability of success of the policy and thus the incentive of the politicians to adopt it. Finally, these countries also had a lot of human capital. These circumstances suggest that the policy of promoting industry had a good chance of succeeding, and other things being equal, this would encourage any government to adopt it.

In addition to the factors that helped to make industrial policy potentially very effective, other factors reduced the political instability that might have flowed from it. Japan and Korea had long histories as independent consolidated polities, and although in Taiwan, China, there was conflict between indigenous Taiwanese and mainlanders who came after the 1948 Chinese Revolution, there was a great deal of cultural and linguistic homogeneity. This was also true of Hong Kong, China, and Singapore. Moreover, all these societies were very egalitarian, with low levels of inequality, although this was partially the outcome of agrarian reforms. This low inequality along with the consolidated nature of the state implied that it might be feasible for incumbent political elites to promote rapid industrialization without being challenged for power (Acemoglu and Robinson 2006).

If indirect benefits are unlikely to generate industry promotion, one source of successful industrial policy will be the rise to political power of groups with specific investments in industry—those who stand to benefit directly from industrialization. This is exactly what Pincus (2009) argues about the Whig coalition in England. Many leading Whig politicians owned factories and nascent industrial enterprises, and they were in favor of policies that increased the value of their assets.

This argument is fine as far as it goes, but it misses a lot. This is because, as Adam Smith pointed out, one of the most attractive things for businessmen is a monopoly. The key characteristic of the Glorious Revolution is that it took place in the shadow of the 1623 Statute of Monopolies, which made it impossible to establish domestic monopolies in Britain. Thus the woolen and linen industries protected by the Calico Acts could not block the emergence of a domestic cotton industry that would compete with them. Moreover, the victorious Whig politicians could not themselves set up domestic monopolies after 1688.

These ideas are well illustrated by the experience of industrialization in Argentina. It is important to recognize that the policy switch in the direction of promoting industry in Argentina and Latin America more generally was an endogenous response to the formation of a new political coalition and was designed both to sustain it as well as to redistribute income to it. During the 1930s in Latin America, there was a huge change in the terms of trade, which led to a reallocation of resources into the urban and industrial sectors, where relative prices had risen. This shock, which came following movements toward greater democratic participation in many countries, greatly empowered urban and industrial interests and led to the emergence of a new politics. Along with this came the initiation of the ISI model of development.

This policy response took some time to emerge, and it did so in the context of the rise of new political movements and parties rooted in the changing economic and political landscape. In Brazil this was marked by the rise of Getúlio Vargas and the creation of the Estado Novo in 1937, the emergence of the Alianza Popular Revolucionaria Americana under Víctor Haya de la Torre in Peru, the presidency of Lázaro Cárdenas in Mexico between 1934 and 1940, and the rising power of Juan Perón in Argentina after 1943.

Although these new political forces promoted industry, the right way to think about this policy was that it directly benefited those newly empowered. Gerchunoff (1989) sums up Peronist economic policy in Argentina in the following way: "There was no specific and unified Peronist economic policy, much less a long-term development strategy. In spite of official rhetoric about a plan, the objective—and at times exclusive—priority was . . . an economic order capable of maintaining the new distributive model." There was an industrialization policy, because this was in the interests of those now choosing the economic policies, but the form that this policy took, while not as bad as that of Ghana in the 1960s, was not of a socially efficient form and certainly did not create the incentives necessary to stimulate rapid industrialization. In line with the evaluation of Gerchunoff (1989), Díaz Alejandro (1970, 126) concludes, "Peronist policies present a picture of a government interested not so much in industrialization as in a nationalistic and populist policy of increasing the real consumption, employment, and economic security of the masses—and of the new entrepreneurs. It chose these goals even at the expense of capital formation and of the economy's capacity to transform." Elsewhere, in a very relevant passage, Díaz Alejandro notes (1970, 65),

> The main problem arises in that policies which are best from the viewpoint of economic efficiency (e.g. free, or nearly free, trade) generate an income distribution favorable to the owners of the relatively most abundant factor of production (e.g. land) and therefore strengthen the position of the traditional elite . . . long-run efficiency and a popular income distribution could only be reconciled by a sophisticated fiscal system, not an easy thing to achieve.

Compared to the Glorious Revolution, what was missing from the Peronist Revolution was the Statute of Monopolies. This discussion also indicates another large difference in the circumstances between the East Asian miracle economies and Latin America or Africa. In none of the East Asian countries were there strong rural interests who could either oppose industrialization or be exploited by urban groups. Singapore and Hong Kong, China, had no hinterland, and in Japan, Taiwan (China), and Korea agrarian reforms removed the power of rural elites.

Why did Britain have a Statute of Monopolies, but not Argentina? These differing outcomes have deep roots in the historical development of the institutions of these societies. The policy outcomes chosen in Latin America in the 1930s and 1940s were the path-dependent outcome of a process of institution formation that went back to the colonial period (Engerman and Sokoloff 1997; Acemoglu, Johnson, and Robinson 2001). Latin American colonial societies developed economic institutions aimed at creating and extracting rents from indigenous peoples and slaves. This greatly benefited a narrow elite at the expense of society and was responsible for the huge levels of inequality in that region.

The political coalition that formed in Latin America in the 1930s and the policies it adopted were highly path dependent, reflecting the institutional history of Latin America, with a focus on rent creation and extraction. This led to monopolies and a highly clientelistic political strategy, which mirrored that of the previous oligarchies. The path of institution creation in Britain was very different, and in the late medieval and early modern period a series of shocks and structural changes radically changed the balance of power in society toward one that not only empowered those with different policy interests, but also created a series of de facto and de jure checks and balances out of which measures such as the Statute of Monopolies arose (see Acemoglu, Johnson, and Robinson 2005b; Pincus 2009).

The successful promotion of industry in East Asia is a consequence of the historical development path there. In addition to some of the structural factors that influenced the costs and benefits to political elites of industrial policy, one more factor merits emphasis. Korea and Taiwan, China, both former Japanese colonies, were heavily influenced by the experience of defense modernization on which Japan had embarked after the Meiji Restoration in an attempt to avoid being colonized by Europeans. Such a goal also heavily motivated Sun Yat-sen and the Chinese nationalist movement, which took over Taiwan, China, in 1948. Moreover, their precarious international position and intense competition with the Democratic People's Republic of Korea and China created large incentives for the governments to promote industry. These factors made it far more imperative for Korea and Taiwan, China, to develop a strong industrial sector.

A New Approach to Industrial Policy

My interpretation of this evidence suggests that failed industrial policy, like bad policy more generally, is the consequence of perverse political incentives. The successful promotion of industry therefore requires changes in the political equilibrium in such a way as to align the incentives of the politically powerful with those of society. This may be achieved by changes in political institutions, or it may be achieved by endogenous changes in the balance of de facto power in society. The successful industrial policy of East Asian countries reflects the very different political equilibrium that emerged historically in this part of the world compared to Latin America or Sub-Saharan Africa.

The historical roots of these development paths and the endogenous nature of industrial policy do not lend themselves to simple policy proposals because it is not clear how to replicate the political equilibrium of Korea or Taiwan, China, elsewhere in the world. My discussion should have made clear that many unique factors are associated with the experience of these economies. Industrial policy—promoting industry—requires an understanding of the political equilibrium of a society, the actors and their interests, the political institutions, de facto and de jure power, and how these pieces all fit together. In such a situation there will be many potential ways to promote industry. One would be intervening to strengthen those with a vested interest in this outcome. Another would be to change political institutions to try to induce greater political competition in the hope that this would stimulate more socially efficient policies. An alternative to nudging the political equilibrium would be to try to work within it, for example, by creating incentives for existing political elites to change policy. Without sketching in any detail what a framework for this type of industrial policy would look like, I hope I have made clear why we need to think in this way.

Conclusions

In this essay I have tried to make a simple argument. There are good reasons to believe from economic theory that industrial policy may be socially desirable and may stimulate economic growth and development. Some salient examples support this idea. Some industrial policies seem to have worked. Yet some have not. I have argued that the difference between these cases lies in the politics of the different societies that adopted the policies. Like any socially desirable policy, industrial policy may not necessarily be an outcome of a political equilibrium, and if it is, it may not be of a desirable form (it may be more about redistributing income or political power than promoting economic growth). Thus the reason that industrial policy failed in so many African countries in the 1960s is the same as the reason that economic policies were generally very bad in that region: policies were driven by the desire to maintain political power, and this was generally inconsistent with economic growth. The difference between these cases and less extreme ones in Latin America and East Asia is that the political equilibrium in East Asian countries was very different. The geopolitical and historical situation in East Asia was distinct. Finally, I have argued that, if this political economy perspective is correct, then this entails thinking about industrial policy in a new way. It is not sufficient just to propose good economic policies; one must propose a way in which they will be endogenously chosen by those with the political power to do so.

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Comment on "Industrial Policy and Development: A Political Economy Perspective," by James A. Robinson

BERT HOFMAN

Professor Robinson has written an eloquent, insightful, relevant, and somewhat provocative paper. The paper draws on his rich historical and institutional knowledge and is in many ways an application of the analysis of his seminal paper "The Colonial Origins of Economic Development" (Acemoglu, Johnson, and Robinson 2001) and his more recent paper "Persistence of Power, Elites, and Institutions" (Acemoglu and Robinson 2008). The paper's core thesis is that the outcome of industrial policies in the end depends on the political equilibrium in which these policies are applied and that this political equilibrium explains why those policies work well in some countries, including some East Asian countries, and not in others, including some African and Latin American countries. The implication for policy advisers such as myself, the paper argues, is that analyzing and understanding the political economy of a country are as important as, if not more important than, the technical-economic design of industrial policies themselves.

The core insight of the paper is a major step in the direction of a positive theory of industrial policy, one that is very welcome. Rather than arguing that (a) government failures, erroneous economic theories, or rent seeking undermine industrial policies or, in contrast, that (b) industrial policies can work in the presence of a number of technical success factors such as openness and a competent bureaucracy, the paper proposes that the underlying power structure is the true determinant of the outcome of industrial policies. This power structure, Robinson argues, is the outcome of long historical processes, often dating back to colonial times. It can change, of course, through shocks such as wars, revolutions, and technology, and the paper presents examples of such shocks, which can in the end lead to a new equilibrium that is conducive to good outcomes of industrial policies. But dramatic shocks and revolutions

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Annual World Bank Conference on Development Economics 2010, Global

aside, the policy adviser is usually confronted with an environment in which power elites are well established and the outcome of any policy is predetermined to be in the interests of those power elites. These interests often diverge from the "common good" of the greatest advantage for the largest number of people. While entirely plausible, the core thesis is hard to prove or disprove empirically. Professor Robinson does provide several examples of industrial policies gone right and wrong. But because the "interests of the power structure" are not directly measurable, the thesis becomes almost tautological: "The outcome of industrial policies was the way it was because the underlying power structure determined it to be the way it has turned out to be."

Fortunately, there are also examples of industrial policies that are clearly in the interests of the power elite and at the same time also provide benefits to the general public. The dual-track reforms in China may well be an example of that. Reforming the Chinese economic system at the margin—leaving the planned system in place, while allowing the market to work with above-plan output—was not only an astute political compromise between reformers and old-fashioned communists, but also appropriate economic policies for the broader masses. For that matter, even the "crony capitalism" under Suharto's Indonesia, which clearly benefited a select group of entrepreneurs in a disproportionate way, also lifted more than half of the population out of poverty in the course of 30 years. So Robinson's conclusion that all successful industrial policies serve the power elite need not be as dismal as it first sounds. Indeed, good outcomes, he argues, can still be achieved in an environment of selfish power elites, but again, this makes Robinson's theory rather Panglossian: "Every outcome of industrial policy is the best possible outcome imaginable given the underlying political equilibrium."

Robinson raises some important questions on the role of the policy adviser, including the role of the World Bank. He recommends that the economic policy adviser should pay attention to political economy factors and the specific political equilibrium that will determine the outcome of the policy actions he recommends. Being a policy adviser myself, I am slightly bemused by the recommendation because this is indeed what we do on a daily basis, even though considerations of political economy may not always be prominent in official reports for obvious reasons. The fact of the matter is, however, that such analysis is hard to do, and the consequences of policy recommendations—in other words, the trajectory from one equilibrium to the next—are rarely obvious, even if one tries to analyze the actions from a political economy perspective.

And indeed, the equilibrium is not static. Take China again: even if more standard market-based reforms would have been economically beneficial in 1978, they were simply not politically feasible, and the World Bank, which started to engage with China in 1980, was well aware of this. But by the early 1990s, after 15 years of reforms and the creation from scratch of something that might be called an entrepreneurial class, much more was possible, and the Bank (and others) felt much more confident in recommending the type of market-based reforms that were approved in 1993. Or take Indonesia, where industrial policies that by and large drew on the comparative advantage of the country worked well in the first two decades of Suharto's reign, but became increasingly captured by connected insiders and in the end contributed to the severe economic crisis (and the fall of the Suharto government). Hard as it is to determine the political equilibrium so as to offer the right policy advice, it becomes even harder as this political equilibrium is dynamic and sometimes changes under the influence of the very economic reforms recommended in the past.

Nevertheless, I believe that more insights into the political economy and dynamics of the countries we work in are indeed most welcome, and, as mentioned, Professor Robinson's paper makes a valuable contribution toward those better insights. In the meantime, though, we have to do with our amateurish insights and, indeed, trial and error, because the political power structure often only reveals itself in the outcome of policies advised, and the results, as Professor Robinson and others show elsewhere, are often unintended or unexpected.

Finally, Professor Robinson seems to put little value on ideas and economic theory themselves as determinants of the outcomes of industrial policy. In fact, he hardly bothers to define those policies, saying "all policies that influence industry." This is somewhat surprising, as those ideas have evolved dramatically over the last five decades. In the 1950s it was a respected view that the state should take "control over the commanding heights of the economy," and import substitution—so maligned afterward—was considered a viable development strategy. By the 1980s, under the influence of new academic ideas as well as disappointing outcomes of the earlier strategies, and I may add Professor Anne Krueger's seminal contributions (Krueger 1974) and intellectual legacy at the World Bank, structural adjustment and "getting the prices right" were the new paradigm, preached and practiced in many diverse political environments. Of course, Robinson's point is that this was wrong, as both strands of policy recommendations neglected the political equilibrium. Maybe so, but the technical design of the policies themselves still has a role to play. Even with a conducive political environment, a policy adviser can advise the wrong thing and get the recommendations accepted. Indeed, even the success stories in East Asia show numerous examples of wrong turns and dead ends in the pursuit of industrial development. The difference with the unsuccessful examples is perhaps that they did not persist in doing the wrong thing and instead dropped unpromising ideas and switched to better ones. Thus my conclusion is that there is more than political economy to the art of industrial policy making.

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