



Industrial Policy and Development: A Political Economy Perspective

**James A. Robinson
Department of Government and IQSS
Harvard University**

Industrial Policy and Development: A Political Economy Perspective¹

James A. Robinson
Harvard University
Department of Government and IQSS

May 2009

¹ Paper prepared for the 2009 World Bank ABCDE conference in Seoul June 22-24.

I. Introduction

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 counter-factual 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 implemented the policy have either themselves 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 derivative from the first four, is that economists and international institutions have to change the way they think about “industrial policy”. To really promote industrialization in a society we need a positive theory of the political equilibrium of that society which 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 explain why industrial policy was adopted and apparently so successful in Taiwan, for example, and such a disaster in Ghana. It is towards building such a theory that research should focus and without it I argue that advocating industrial policy in the traditional sense as a solution to poor countries’ problems involves a quite 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 what industrial policy is. I take it 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'. This ranges from tariff and trade policy (protection), through tax relief, subsidies of various forms, export processing zones, to state ownership of industry. The way that Joseph Stalin promoted industrialization in the Soviet Union in the 1930s was completely different to the way that General Park Chung Hee did so in South 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 South Korean case since the governments overtly committed themselves to industrialization. In other cases, however, whether or not industrialization occurred intentionally is not obvious. 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 rather vibrant British cotton industry had emerged. The traditional interpretation of these reforms rested on the notion that 18th 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 and David Ricardo amongst others which led 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, pp. 50-51). Neither view suggests that there is any connection between the Calico Acts and industrialization.

However, the Calico Acts, in conjuncture with the Statue 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. Though 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 were correct I would argue no, the fact that industrialization was stimulated was an unintended byproduct. 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 which quite definitely and explicitly had the object of stimulating ‘manufactures’ in other words industrializing. To this end they 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 was part of a vector of policies which probably 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 there was an important role for the government to simulate industrialization with an industrial policy. A particularly important sub-set of these

ideas were those due to 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 Kruger (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 failure. 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 nightwatchman state. This literature was certainly correct in pointing to some very unsuccessful instances of industry policy in developing countries. However, it was rather 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 post-war economics successes of Japan, South Korea and Taiwan, respectively. This research, and much other 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 industry policy was a powerful tool to promote economic growth. This interpretation of the East Asian experience heavily influenced the famous World Bank report in 1992.

Though 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 the type of industrial policy adopted in different cases was very different. In Latin America, for example, it came in the form of Import Substituting Industrialization (ISI) with domestic markets closed to international competition. In South Korea and Taiwan, the model was instead export based with incentives created to induce the development of export industries (though 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, the impulse of many scholars is to 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 model of import substitutions industrialization. Possibly, East Asian politicians had better (or maybe different and luckier) economic advisors 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 policymakers 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 this variation 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. To successfully promote 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 since they had different sets of market failures. Why would some countries adopt policies suited to their market failures and not others? The main reason is uncertainty about what the binding constraints are. Either South 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 which 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 South Korea, Taiwan and many of the other cases studied by the revisionists in the late 1980s. I think 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 totally fail, as it did in Ghana in the 1960s and all over Latin America from the 1940s onwards. But the difference between these cases is not that the Japanese or South Koreans got lucky, were clever or had better economists advising them, it was because the political equilibrium of these societies differed.

I shall 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 re-assessment of Soviet industrialization developed by Allen (2003). Allen's whole point is to argue that Stalin's industrialization policy was actually optimal in a poor country with bad initial institutions. There is no argument, however, which would lead us to expect the Stalinist regime would adopt an efficient policy (indeed, a vast mass of evidence suggests that efficiency was not high on the criteria which 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 in action 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 Russian reforms). Of course the Great Leap Forward during the 1950s is not viewed as clever, but a big mistake. Though Shleifer and Treisman (2000) did try to analyze Russian policy reforms as an equilibrium outcome, they still argued that they were (constrained) efficient. In fact the evidence suggests that the reason that the Chinese did things differently from 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 though 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 do political economy. Variation in the adoption of industrial policy or in its success or failure has less to do with ideas or economists, though 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 are the political institutions, etc. Understanding comparative policy is thus an exercise in comparative politics. This is a difficult exercise and we are far from having a satisfactory framework which 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, to have an “industry 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 can mean two things. First, 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 in fact the World Bank has few reservations in adopting policies aimed at

strengthening the power of poor people (for example through with an eye to generating more accountability and better service delivery). Second, holding the political equilibrium constant, trying to find a way of casting a pro-industry policy which will be incentive compatible for those holding power.

The paper proceeds as follows. In the next section I discuss the normative approach to industrial policy. In section III I then examine what the evidence suggests about the effectiveness of industrial policy. In section IV I emphasize that the differences between the successes and failures are mostly due to differences in political economy. Section V then sketches what a positive political economy theory of industrial policy should look like and section VI then examines what such a positive theory would imply for how we should re-think our understanding of industrial policy. Section VII concludes.

II. Normative Industrial Policy

The welfare economics argument in favor of industrial policy is straightforward and well understood. It is quite likely there are market imperfections, externalities, increasing returns etc. which suggest that various forms of industry 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). The simplest form of industry policy, that of subsidizing industrial activity

directly, 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 generated positive externalities and where international prices were 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, 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, and Acemoglu and Robinson, 2001). In this essay I leave this issue aside and simply observe here 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 shall 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 bases for many of the industrial policies we see, such as that adopted by the Soviet Union after 1928 though this is possibly the case under some very specific assumptions about the policy instruments available to the government.

III. The Experience of Industrial Policy

I now briefly discuss a series of examples of failed and successful industrial policy. My main argument is not that industry policy is always bad or always good. I believe, and I think the evidence suggests, that it 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 I then develop more systematically.

The poster children for those who advocate industrial policy are the East Asian “miracle” economies. As I mentioned in the introduction, there is now a large literature documenting this. Wade (1990) Chapters 4 to 6 documents in great detail the case of Taiwan. There are many fascinating stories about how the government systematically intervened in the economy from the 1950s onwards 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 USA consultant J.G. White Engineering Corporation, that plastics was a suitable industry to develop (Wade, 1990, p. 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 him to start the business! The first factory was built under government supervision and given to Wang in 1957. Wang, subsequently head of the Formosa Plastic’s Group, went on to become one of the leading entrepreneurs in the country. 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, p.81). Though the private sector was developed in Taiwan, the public sector was heavily involved in this industrialization drive with as much of 60% of R&D expenditure being attributable to the public sector in the 1980s (Wade, 1990, p. 99) with a key role being played by the Industrial Policy Research Institute started in 1973. This 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, pp. 139-148). They also started a large-scale integrated steel mill, as in South Korea.

Figure 1 from Wade (1990, p. 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 South Korea, Taiwan has not been able to develop an internationally competitive motor vehicle industry despite a sustained attempt. 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 is impressive and convincing. This greatly bolsters the case for industry policy. Unfortunately, however, there are many cases of unsuccessful industry policy. Some of the best documented come from Sub-Saharan Africa. After independence many African countries adopted types of industry policy with some such as Ghana and Zambia announcing five year plans and very ambitious targets. As in Taiwan, these programs were often led by the public sector. Unfortunately, in no Sub-Saharan African country did they generate internationally competitive industry. Typically, while there was rapid capital accumulation, the industry which was developed was incredibly inefficient so that total factor productivity was abysmal.

One of the most detailed studies of the failure of industry policy in Africa is Killick's book (1978) seminal book about development in Ghana. 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 and illustrates in one case after another how inefficient they were. He shows that cost benefit calculations were ignored and inefficient investment projects undertaken. One example was a cattle-based industrial complex (Killick, 1978, p. 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 somewhat understatedly remarks (p. 231) 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, [and] which was said to exceed by some multiple the total world trade in such items” (Killick, 1978, p.229). The government's own report on this factory is worth quoting at some length (Killick, 1978, p. 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 by 80% between 1960-1965 (Killick, 1978, p.69), 60% of which being by the public sector (80% of non-residential investment, Killick, 1978, p. 170). The problem was in the way this investment was allocated.

It would be easy to present many pages of other similar examples from Sub-Saharan Africa. Though the situation is perhaps less bad in Latin America with even a few successes, particularly in Brazil, it is again 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 it rather led to uncompetitive monopolies or oligopolies producing poor quality goods for protected domestic markets.

IV. The Political Economy of Success and Failure

What is the difference between the examples of the successful and unsuccessful industry policy? Why did it work so well in Taiwan but not in Ghana? Though there were certainly differences in the way that the policy was implemented (e.g. inward looking versus outward looking) I believe that 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 in the Taiwanese case early import substitution in the 1950s proved an important period which 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 Ghana, could of worked. The fact that it did not was due to the politics of these countries.

To get a sense of my argument let's return to Africa. Documenting the failure of INDECO the Industrial Development Corporation of Zambia to promote industrialization Tangri (1999, p. 30) argues that this was 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 centres, 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, MITI, was that in Zambia the choice of policy, of 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, p. 195) argues that “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,” and Omaboe (1966, p. 460-461) 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.

V. Positive Industrial Policy

So industrial policy can work, but it may also 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 really explain the successes and failures of industrial policy we need to dig into these political factors. What was it about the politics of Taiwan 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 which have addressed these questions are Wade (1990), Haggard (1990) and Evans (1995).

To set the scene I now briefly discuss a theory of endogenous policy to give some background to my way of thinking about these issues (see Acemoglu, Johnson and Robinson, 2005b, for an extensive discussion). Economic policies (and more generally institutions which 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 not only determine 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 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 above, 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 what 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* political power. 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 vs. 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, i.e., 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 their ability to use (or misuse) existing political institutions and also their option to hire and use force against different groups.

It will be composition of de facto and de jure power in society that 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 which increase even 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 though providing public goods may increase the incomes of the elite, staying in power may be better achieved by using redistributive instruments which 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 counter-arguments (Acemoglu, 2003) and they do not appear to be relevant to the mostly non-democratic regimes I have been discussing so far. Whatever led to successful industrial policy in Taiwan it was not domestic political competition since the country 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. As I suggested above however, the problem with this argument is that industrialization will almost certainly undermine the political status quo, as it did in both the Taiwanese and South Korean cases.

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 South Korea and Taiwan, because of their colonial experiences under Japanese rule had had quite extensive histories of industrialization. When their governments began to promote industry in the 1960s there were entrepreneurs and experience. Both Singapore and Hong Kong had long histories of mercantile capitalism. In addition, in the Korean and Taiwanese cases there was an extensive bureaucratic tradition which 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 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 equal this would encourage any government to adopt it.

In addition to these factors which helped to make industry policy potentially very effective, other factors reduced the political instability that might have flowed from it. Japan and South Korea had long histories as independent consolidated polities and while in Taiwan 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 and Singapore. Moreover, all these societies were very egalitarian with low levels of inequality, though 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 rapidly industrialization without there being large challenges for power (Acemoglu and Robinson, 2006).

If indirect benefits are unlikely to generate industry promotion, returning to the Glorious Revolution, 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 (12009) 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 also misses a lot. This is because, as Adam Smith pointed out, one of the most attractive things for businessmen is a monopoly. The key thing about the Glorious Revolution was 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 which would compete with them. Moreover, the victorious Whig politicians could not themselves set up domestic monopolies after 1688.

These ideas are very 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 re-allocation of resources into the urban and industrial sectors whose relative prices had risen. This shock, which came following movements towards 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 APRA 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.

Though these new political forces promoted industry the right way to think about this policy was that it was in the direct benefit of 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, p. 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, p. 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.”

Comparing the Glorious Revolution to the Peronist Revolution one can see that what was missing from the latter was the Statute of Monopolies. This discussion also indictates 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 had no hinterland and in Japan, Taiwan and South 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, elite something 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 was a very path dependent one which reflected 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 towards one which 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 such measures as the Statute of Monopolies arose (see Acemoglu, Johnson and Robinson, 2005a, Pincus, 2009).

The successful promotion of industry in East Asia is a consequence of the historical development path there. I emphasized some of the structural factors which influenced the costs and benefits to political elites of industrial policy. One more factor merits emphasis. South Korea and Taiwan, 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 in 1948. Moreover, their precarious international position and intense competition with North Korea and China created large incentives for the governments to promote industry. These factors made it far more imperative that South Korea and Taiwan develop a strong industrial sector.

VII. 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 political 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 which 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 Taiwan or South Korea elsewhere in the World. My discussion should have made clear that there are many unique factors associated with the experience of these countries. Industrial policy – promoting industry – requires an understanding of the political equilibrium of a society, of the actors and their interests, the

political institutions, of 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. I cannot sketch here in any detail what a framework for this type of industry policy would look like, but I hope I have made clear why we need to think in this way.

VII. Conclusions

In this essay I have tried to make a simple argument. There are good reasons to believe from economic theory that industry policy may be socially desirable and may stimulate economic growth and development. Some salient examples support this idea – some industry policies really do 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, industry 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 industry 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 – this was because 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 the East Asian countries is that the political equilibrium in these

latter ones 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 industry policy in a new way. It is not sufficient to just 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.

References

- Acemoglu, Daron (2003)** “Why Not a Political Coase Theorem? Social Conflict, Commitment and Politics,” *Journal of Comparative Economics*, 31, 620-652.
- Acemoglu, Daron, Simon Johnson and James A. Robinson (2001)** “The Colonial Origins of Comparative Development: An Empirical Investigation,” *American Economic Review*, 91, 1369-1401.
- Acemoglu, Daron, Simon Johnson and James A. Robinson (2005a)** “The Rise of Europe: Atlantic Trade, Institutional Change, and Economic Growth,” *American Economic Review* 95, 546-79.
- Acemoglu, Daron, Simon Johnson and James A. Robinson (2005b)** “Institutions as a Fundamental Cause of Development,” in Philippe Aghion and Steven Durlauf eds. *The Handbook of Economic Growth*, Amsterdam: North-Holland.
- Acemoglu, Daron and James A. Robinson (2001)** “Inefficient Redistribution,” *American Political Science Review*, 95, 649-62.
- Acemoglu, Daron and James A. Robinson (2006)** *Economic Origins of Dictatorship and Democracy*, New York: Cambridge University Press.
- Allen, Robert C. (2003)** *Farm to Factory: A Reinterpretation of the Soviet Industrial Revolution*, Princeton: Princeton University Press.
- Amsden, Alice H. (1989)** *Asia's next Giant: South Korea and Late Industrialization*, New York: Oxford University Press.
- Bates, Robert H. (1981)** *Markets and States in Tropical Africa*, Berkeley: University of California Press.
- Coate, Stephen T. and Stephen E. Morris (1995)** “On the Design of Transfers to Special Interests,” *Journal of Political Economy*, 103, 1210-1235.

Díaz Alejandro, Carlos F. (1970) *Essays on the Economic History of the Argentine Republic*, New Haven: Yale University Press.

Evans, Peter B. (1995) *Embedded Autonomy*, Princeton: Princeton University Press.

Gerchunoff, Pablo (1989) “Peronist Economic Policies, 1946-1955,” in Rudiger Dornbusch and Guido di Tella eds. *The Political Economy of Argentina, 1946-1983*, Pittsburg: University of Pittsburg Press.

Gregory, Paul R. and Mark Harrison (2005) “Allocation under Dictatorship: Research in Stalin’s Archives,” *Journal of Economic Literature*, 43, 721-61.

Haggard, Stephan (1990) *Pathways from the Periphery: The Politics of Growth in the Newly Industrializing Countries*, Ithaca: Cornell University Press.

Hausman, Ricardo, Dani Rodrik and Andres Velasco (2007) “Growth Diagnostics,” Chapter 3 in Dani Rodrik’s *One Economics, Many Recipes*, Princeton: Princeton University Press.

Johnson, Chalmers A. (1982) *MITI and the Japanese Miracle: The Growth of Industrial Policy 1925-1975*, Stanford: Stanford University Press.

Killick, Tony (1978) *Development Economics in Action; A Study of Economic Policies in Ghana*, London: Heinemann.

Krueger, Anne O. (1993) *Political Economy of Policy Reform in Developing Countries*, Cambridge: MIT Press.

Lal, Deepak (1983) *The Poverty of Development Economics*, London: Institute of Economic Affairs.

Lau, Lawrence J., Yingyi Qian and Gérard Roland (2000) “Reform without Losers: An Interpretation of China’s Dual Track Approach to Transition,” *Journal of Political Economy*, 108, 121-143.

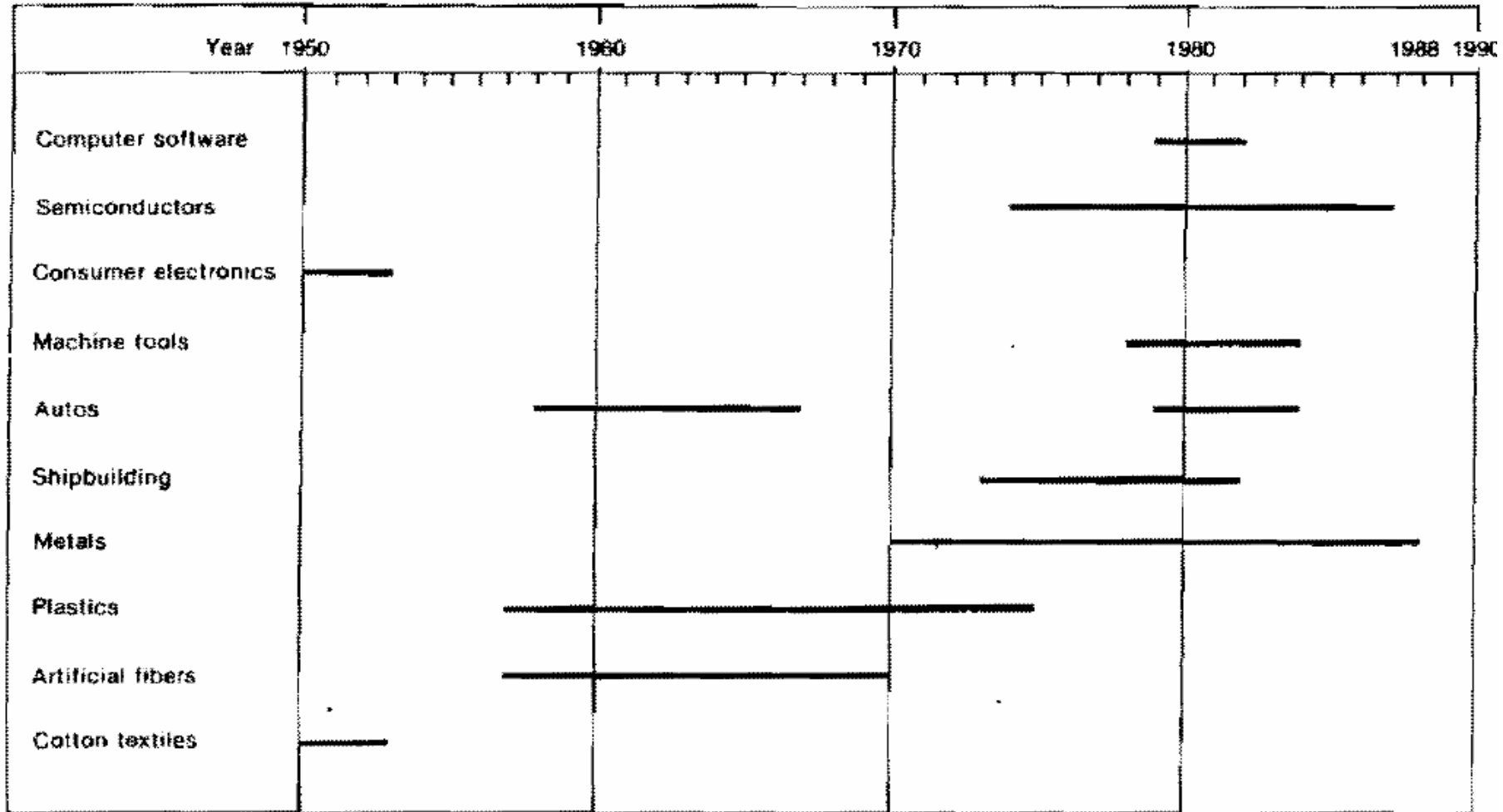
- Lewis, W. Arthur (1953)** *Report on Industrialization of the Gold Coast*, Accra: Government Printing Department.
- Matsuyama, Kiminori (1992)** “Agricultural Productivity, Comparative Advantage, and Economic Growth,” *Journal of Economic Theory*, 58, 317-334
- Meade, James E. (1961)** *The Economic and Social Structure of Mauritius: Report to the Governor of Mauritius*, London: Methuen.
- Mokyr, Joel (1999)** “Introduction” in Joel Mokyr ed. *The British Industrial Revolution: An Economic Perspective*, 2nd Edition, Boulder: Westview Press.
- Naughton, Barry (2007)** *The Chinese Economy: Transitions and Growth*, Cambridge: MIT Press.
- Omaboe, E.N. (1966)** “The Public Sector” in Walter Birmingham, I. Neustadt and E.N. Omaboe eds. *A Study of Contemporary Ghana: Volume I The Economy of Ghana*, London: Allen and Unwin.
- Pincus, Steven C.A. (2009)** *1688: The First Modern Revolution*, New Haven: Yale University Press.
- Rimmer, Douglas (1969)** “The Abstraction from Politics,” *Journal of Development Studies*, 5, 190-204.
- Rodrik, Dani (2007)** *One Economics, Many Recipes*, Princeton: Princeton University Press.
- Shirk, Susan L. (1993)** *The Political Logic of Economic Reform in China*, Berkeley: University of California Press.
- Shleifer, Andrei and Daniel Treisman (2000)** *Without a Map: Political Tactics and Economic Reform in Russia*, Cambridge: MIT Press.
- Tangri, Roger (1999)** *The Politics of Patronage in Africa*, Oxford: James Currey.
- Wade, Robert H. (1990)** *Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization*, Princeton: Princeton University Press.

Wittman, Donald (1989) “Why Democracies are Efficient,” *Journal of Political Economy*, 97, 1395-1424.

World Bank (1993) *The East Asian Miracle: Economic Growth and Public Policy*, New York: Oxford University Press.

Figure 1

State Leadership Episodes in Taiwan's Industries



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.