Industrial Policy and East Asia – The Miracle, the Crisis, and the Future

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Industrial Policy and East Asia
- The Miracle, the Crisis, and the Future

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Ha-Joon Chang*

Faculty of Economics and Politics

University of Cambridge

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1. **Introduction**

Industrial policy issue has been arguably at the heart of the debate on the East Asian developmental experience during the last two decades or so. In the late 1970s and the early 1980s, there was an intense international debate on the issue, largely prompted by the Japanese industrial success during the first three decades of the postwar period.[1] In the late 1980s, similar policies in the next tier of East Asian success stories such as South Korea (henceforth Korea) and Taiwan stirred up the second phase of the debate.

Unlike in the case of Japan, the interventionist nature of whose industrial policy was widely (if not universally) acknowledged, the orthodoxy regarding Korea and Taiwan until the early 1980s was that they were free-market, free-trade economies with little industrial policy (e.g., Ranis & Fei, 1975, Balassa et al., 1982). From the early 1980s, however, there emerged a number of researches that questioned this orthodoxy and emphasised the role of industrial policy in the economic success of these countries (Sakong & Jones ,1980; Evans & Elizadeh, 1984; Amsden, 1985; Luedde-Neurath, 1986). Partly as a consequence of these, some mainstream commentators started to acknowledge the existence of industrial policy in these countries, although they denied that it made many impacts – either on the ground that industrial policy measures in these countries were self-cancelling (e.g., the "virtual free trade" position of Little, 1982, and World Bank, 1987) or on the ground that they

[1] Important works that emphasised the positive contribution of Japanese industrial policy include Magaziner & Hout (1980), Johnson (1982), and Reich (1982). In the opposite camp, Schultze (1983) and Badaracco & Yoffie (1983) were influential. Reviews of this first phase of industrial policy debate can be found in: Johnson (ed.) (1984), introduction; Thompson (ed.), 1989; and Chang (1994), ch. 3.

were porous (e.g., the theory of "proscriptive vs. prescriptive" intervention proposed by Bhagwati, 1988). The publication of the works by Amsden (1989) on Korea and Wade (1990) on Taiwan were the culmination of the so-called "revisionist" offensive that started in the early 1980s, to which the East Asian Miracle report was the mainstream answer.[2]

Contrary to the expectation of its authors, the East Asian Miracle report failed to put an end to the debate. First of all, important methodological and empirical criticisms of the report were made (see the special symposium in *World Development*, 1994, no. 4; Fishlow et al., 1994; Singh, 1994), but its authors have not provided convincing answers to them. Moreover, there were issues that were, at least in my view, inadequately addressed, both by the authors of the report and its critics, in the earlier debate surrounding the report. A more balanced assessment of the role of industrial policy in East Asia requires examination of these issues. Thirdly, the recession in Japan and the financial crises in a number of other East Asian economies, which occurred since the publication of the EAM, have made popular the view that industrial policy created economic problems, rather than miracles, in the region. Given that one main conclusion of the EAM was that industrial policy have had few positive impacts, rather than that it was harmful, these recent events call for a re-examination of the role of industrial policy in the region.

This paper is organised in the following manner. First of all, we will present a critical review of the EAM (section 2). Here, we will devote more efforts to raising

[2] For a more detailed review of the evolution of the debate on industrial policy leading up to the publication of the East Asian Miracle report, see Chang (1993). For the political background to the publication of the report, see Wade (1996).

issues that were neglected in the earlier debate, rather than to going over the issues that were already debated. Next, we assess the currently popular view that industrial policy was behind the "downfall" of the East Asian model (section 3). Then we discuss whether the more recent economic, political, and institutional changes (both at the national and international levels) have made the use of industrial policy in East Asia less feasible in the future (section 4). This is followed by concluding remarks (section 5).

1. The East Asian Miracle Report on Industrial Policy: Contributions and Limitations

The East Asian Miracle report (henceforth EAM) distinguished itself from the previous publications by the World Bank and most mainstream economists on the role of industrial policy in East Asia at least in two respects.

First of all, it acknowledged the existence of industrial policy in the non-Japanese East Asian countries. As we mentioned earlier, in the case of Japan, the existence of interventionist industrial and trade policies was widely acknowledged from the early days, while the very existence of industrial policy was a matter of intense debate in the case of Korea and Taiwan even until the late 1980s.[3] The EAM

[3] For example, as late as 1988, the famous mainstream trade economist Bela Balassa was arguing that "apart from the promotion of shipbuilding and steel, [the role of the state in Korea] has been to create a modern infrastructure, to provide a stable incentive system, and to ensure that government bureaucracy will help rather than hinder exports" (Balassa, 1988, S.286).

accepted the contention of the "revisionists" that the extent and the degree of industrial policy in these countries were much larger than what the mainstream economists cared to admit before, and started the discussion from there.

Secondly, the EAM clearly accepted a number of important theoretical justifications for industrial policy – such as the so-called "Big Push" argument and the existence of learning externalities (see below). This was a big contrast to many earlier mainstream works, which argued that market failures were limited to areas like infrastructure, education, and health, and therefore that there was no reason for governments to intervene in industry, especially at the sectoral level.

Having abandoned the early mainstream practice of dismissing the issue of industrial policy as theoretically unjustifiable and/or largely absent in the East Asian countries, the EAM resorted to two arguments of more practical vent in order to come up with a negative verdict on industrial policy.

First of all, it tried to show empirically that industrial policy, despite its widespread existence, did not make much difference either to the production structure or the productivity performance of the East Asian countries. Secondly, it argued that, whatever its contribution to the development of some East Asian countries may have been, industrial policy cannot be adopted by the developing countries of today because they face different domestic and international conditions. The latter countries lack, it was argued, firstly, the domestic institutions needed for the effective implementation of East-Asian-style industrial policy (especially a competent bureaucracy), and, secondly, the kind of "permissive" international trading environment that the East Asian countries enjoyed during the time when they actively

used such policy (that is, between the 1950s and the 1970s) has ceased to exist, especially following the recent conclusion of the Uruguay Round of the GATT talks.

In the rest of this section, we critically examine the three aspects of the EAM's verdict on industrial policy that we mentioned above – its (partial) theoretical acceptance of industrial policy (section 2.1), its empirical refutation of the success of the policy in East Asia (section 2.2), and the practical objections that it raises to the transferability of the policy to other countries (section 2.3) – and bring out some issues that we think were inadequately dealt with in the earlier debate.

1.1. Theoretical Justifications for Industrial Policy

As we have repeatedly mentioned, the EAM acknowledged some important justifications for industrial policy, unlike the previous orthodox publications on the subject (see pp. 90-3, and pp. 293-4). First of all, the need to coordinate complementary investments, in the presence of significant scale economies and capital market imperfections, was acknowledged - this is the well-known "Big Push" argument. Secondly, the role that the state can play as the organiser of domestic firms into implicit cartels in their negotiations with foreign firms or governments was recognised. Thirdly, the importance of learning externalities was emphasised.

However, in the same breath, the EAM dismissed another important theoretical justification for industrial policy, namely, infant industry promotion, on the ground that its success is not guaranteed. I find this refutation rather peculiar, since all the other theoretical justifications for industrial policy that the EAM accepted do not guarantee success of the policies based on them either. But apart from this

rather obvious point, I do not think there is much added value in my elaborating on the theoretical arguments that have already been accepted by the EAM. Therefore, I wish to discuss a few other theoretical justifications for industrial policy which were more or less ignored by the EAM (and in fact by many of its critics) and discuss their implications.

2.1.1. Coordination of Competing Investments

The first of the under-explored justifications for industrial policy is the issue of coordinating investments not simply between complementary investment projects but between competing projects – what is known as "managed competition". This issue was actually the central point of contention in the industrial policy debate of the early 1980s surrounding the Japanese experience, but was curiously ignored by the EAM.

The logic here is that oligopolistic competition that characterises many modern industries with significant scale economy often leads to excess capacity, unless there is a coordination of investment activities across competing firms. Excess capacity leads to price war, which damages the profits of the firms concerned and may force them to scrap some of their assets. It can also lead to bankruptcy.

Needless to say, asset scrapping and bankruptcy are useful and costless ways of re-arranging property rights in a world without transaction costs and "specific assets" (the term is due to Williamson, 1985), but we are *not* living in such a world. This means that the specific assets involved in this process have to be scrapped or re-allocated to alternative uses that can create much less value out of the assets concerned, thus incurring a social cost. If the emergence of excess capacity can be prevented through the *ex* ante coordination of competing investments, such social cost

may be reduced (for more detailed arguments, see Chang, 1994, ch. 3; also see Telser, 1987, and Amsden & Singh, 1994).

Many mainstream economists have argued that excess capacity is a non-issue, especially for small economies that are price-takers, because what cannot be consumed in the domestic market can always be exported. However, this is often not a viable option, at least in the short-run (and it is the short run that counts here). First of all, at least since the late 1970s, many industries have been suffering from chronic over-capacity on the world scale.[4] Moreover, real-world markets are often segmented along the lines of quality, design, and geography, and therefore the "world market" may not be as big as it seems, given that it takes time and resources to break into new market segments. In addition, some small economies have deliberately built capacities which are far beyond its domestic markets and have become price-makers, rather than price-takers, even on the world scale. For example, Korea, despite being a relatively small economy, is the world's first or second largest producer of ships (depending on the year) and the third largest producer of micro-chips (the largest if we take memory chips only), and therefore what the country produces does have an important impact on world prices. Indeed, this is why the end to the practice of coordination among competing investments became such a problem in Korea recently (see section 3 for more details).

[4] Of course, this does not mean that new entries cannot or do not happen. The East Asian producers have been quite good at gaining market shares in some industries with chronic over-capacity problem. However, successful entry into these industries will be much more difficult than that into other industries.

Given these considerations, there is a clear theoretical justification for coordinating competing investments. And, indeed, such coordination has been one of the most important components in the industrial policy regimes of the East Asian countries – as manifested in their continuous concern for "excessive competition" or "wasteful competition" and the attempts to minimise duplicative investments through mechanisms such as industrial licensing and investment cartels (see Chang, 1993, for further details).[5] By ignoring this important issue, the EAM ended up neglecting a huge chunk of industrial policy in East Asia.

2.1.2. Further Implications from Scale Economy

The EAM certainly gave a clear recognition to the importance of scale economy in modern industrial development, when it talked about coordination of

[5] When duplicative investments emerged for whatever reason (e.g., government's failure to take timely action, non-compliance by the firms), the East Asian governments tried to minimise excess capacity by encouraging, and sometimes forcing, mergers or recession cartels. There were of course national differences. The Japanese government preferred to use recession cartels, while the Korean government periodically resorted to forced mergers. Examples of the latter include the so-called "industrial restructuring programme" of the early 1980s (which affected industries such as automobile, naval diesel engine, copper smelting, power-generating equipment, heavy electrical machinery, and electronic switching system) and the so-called "Big Deal" programme following the 1997 crisis (which affected industries such as semiconductor, automobile, power-generating equipment, naval diesel engine, aircraft, petrochemical, petroleum refining, and railway carriage).

complementary investments. However, this is not the only way scale economy matters.

First of all, scale economy has an important implication for the cost competitiveness of a country's industry. Economists may have traditionally debated on whether the social cost from monopoly is 1% or 2% of total output, but in industries with significant scale economy, choosing a sub-optimal scale of capacity can often mean 30-50% differences in unit costs. For this reason, the East Asian governments have used measures such as industrial licensing, government procurement, export requirements, and subsidies in order to ensure that factories would be built at scales which are not too much below (and hopefully above) the minimum efficient scale. Of course, this invited criticisms on anti-trust grounds, but their attitude has been that monopolistic firms producing at optimal scale is much less of a drag to the economy than "competitive" firms all producing at sub-optimal scales.

Secondly, scale economy also has a hitherto-ignored link with luxury consumption control (for a more detailed discussion, see Chang, 1997a). The well-known practice of luxury consumption control in East Asian countries - most notoriously, but by no means exclusively or even mainly, through import control - has often been interpreted as no more than a thinly-disguised protectionist ploy or as a manifestation of the paternalistic desire to impose what the government sees as a "sound consumption pattern" (the phrase was explicitly used in, for example, the 4th Five Year Plan document of Korea, p. 27). However, there were much more to these controls. First of all, it was thought important to restrict conspicuous consumption for the purpose of reducing class conflicts, especially given the (real and imagined) presence of Communist threat. Secondly, there was the desire to maximise the investible surplus by repressing luxury consumption out of profit. Thirdly, and most

relevantly to our discussion here, restrictions on the consumption of luxury varieties in industries like passenger car industry, where consumer demand for variety is important, was regarded as important in enabling the producers to attain the maximum possible scale in production.[6]

To sum up, while the EAM acknowledged the crucial role of scale economy in necessitating the coordination of complementary investments, it did not explore its role beyond this. However, while it may sound less fancy than coordinating complementary investments and giving industrial development a "big push", ensuring the achievement of scale economy in key industries was in practice probably a much more important aspect of East Asian industrial policy than the former.

2.1.3. "Protective" Industrial Policy, Social Insurance, and Structural Change

Another aspect of industrial policy that has received little recognition in the East Asian context is its "protective" role. It is widely believed that what distinguishes industrial policy in East Asia is that it concentrated on "picking winners", rather than "protecting losers" as it was often the case in other countries. There is certainly a large element of truth in such view. However, protective industrial policies were also widespread in East Asia, if less so than in other countries. Therefore, we need to go

[6] The cost inefficiency that results from the presence of excessive product variety is widely recognised in, for example, the South African car industry, and for that matter in the same industry of one East Asian country, namely, Taiwan (where about 10 producers each produce several thousand cars in an industry where the minimum efficient scale is believed to be around 300,000 units per year).

deeper if we are to understand why protective industrial policy in East Asia did not end up blocking structural change as in other countries.

We argue that there were two functions that the protective industrial policies in East Asia served. The first function was the more short-term-oriented one of providing "social insurance" to firms which are in a temporary difficulty but cannot borrow their way out of it due to capital market imperfections.[7] Like the policy of coordinating competing investments, the practice can be justified in terms of asset specificity, in that it will be socially inefficient to scrap specific assets in the face of a temporary setback, if the net present values of their future income streams are larger than the costs of supports needed to keep them employed in their current uses (assuming full asset specificity – namely, their value in alternative uses are zero). The best example of such policy is the famous Japanese practice of sanctioning (but closely supervising and disciplining) "recession cartels" in industries deemed to be in a temporary difficulty (see Dore, 1986, and Chang, 1994, ch. 3, for more details).

The second, and probably more important, function was the more long-term-oriented one of promoting structural change. When an industry is in need of a large-scale adjustment, those who had made specific (human and physical, or even relational) investments in the industry face the situation where their next best option is a total scrapping of their assets and therefore a drastic reduction in their income. Unless there is a mechanism that allows them an acceptable level of income during the transition period when they run down their existing assets and re-tool themselves (e.g., purchasing new equipment, retraining of workers), they will have an incentive to resist the change by political means. In such a situation, measures to reduce the

[7] I thank Joe Stiglitz for highlighting this dimension of protective industrial policy, which was only implicit in the earlier version of the paper.

impacts of adjustment on the owners of specific assets can accelerate, rather than slow down, structural change by reducing the political resistance to the change, if they also provide incentives for (physical and mental) re-tooling (for a more detailed argument, see Chang & Rowthorn, 1995).[8]

In Japan, "cartels for structurally-depressed industries" (or SDI cartels) were granted to declining industries in return for their efforts to phase out obsolete capacities and upgrade their technologies (Dore, 1986, provides a fascinating study of this experience; also see Renshaw, 1986). During the late 1980s, some of the declining industries in Korea, such as textile, received temporary supports (e.g., subsidies for equipment upgrading, exemption from anti-trust law), through the rationalisation programmes sanctioned by the Industrial Development Law, on the condition that they achieve certain targets in relation to technology upgrading (see Chang, 1993, for details).

What distinguishes these policies from similar policies in other countries is that they were "forward-looking" in the sense that they made it explicit that the aim of the protection was not to preserve the industries concerned but to phase them out "in an orderly manner" or to technologically upgrade them. Perhaps more importantly, they also had well-specified performance targets for the beneficiaries, thus preventing

[8] Different countries have dealt with this problem in different ways. Many European economies have used unemployment insurance to soften the blow of structural change on the owners of specific human skills and *ad hoc* subsidies to do the same for the owners of specific physical equipments. More proactively, the Scandinavian countries combined such system with the "active labour market policy", which provided re-training and relocation subsidies to the workers. As we shall see, the East Asian countries used protective industrial policy in order to deal with this problem.

the policies from turning into “nursing homes” for declining industries. In other words, because of the way they were designed and implemented, protective industrial policies in East Asia seem to have promoted, rather than hindered, structural change.

To summarise, the EAM, by concentrating on “developmental” industrial policy, ignored “protective” industrial policy. Such industrial policy is often regarded as blocking structural change and therefore not justifiable, but it has played a positive role in East Asia in two ways. Firstly, it provided a social insurance to producers who are experiencing a temporary difficulty but cannot borrow their way out of it due to capital market imperfections. Secondly, and more importantly, it promoted structural change by easing the difficulties involved in moving “specific” resources out of the declining sectors or in upgrading them. Such policy was perhaps not the most important aspect of East Asian industrial policy, but was by no means an unimportant aspect, especially for the more advanced ones like Japan and Korea.

2.2. Empirical Refutation

The essence of the EAM’s empirical verdict on the role of industrial policy in East Asia can be summarised, at the risk of some simplification, as the following: there is no evidence that the industries promoted by industrial policy had higher output growth or more rapid productivity growth than the other industries.

The detailed methodologies and the data used in this study have been already been subject to a range of well-known criticisms, including the problems inherent in the definition and the measurement of total factor productivity (see Lall, 1994, Kwon, 1994, Rodrik, 1994, and Singh, 1994, among others; also see Chang, 1995, appendix).

As they are mostly of technical (which of course does not mean “trivial”) nature, whose summary of which may take up quite a big space, in this section I want to do no more than raising a couple of methodological points that had not been adequately debated in the earlier debate surrounding the EAM.

One major problem in testing the effects of industrial policy in the way that the EAM attempted - namely, trying to correlate the extent of government support for an industry (however measured) and the industry’s performance – is that, as far as one major justification for industrial policy lies in the existence of externalities, it is by definition very difficult (if not entirely impossible) to measure its effects at the sectoral level (the 2-digit level in this case), as its effects will spill over into other sectors. As Joe Stiglitz neatly summed it up in the workshop, if we can measure the effects of such policy, we probably did not need it in the first place.

The EAM does acknowledge this problem but justifies its sectoral approach on the ground that spillover effects are mostly confined to “closely related sectors, often sectors that would be identified with a two-digit classification” (p. 326). The problem with this conclusion is that it is based on one study on the pattern of spillovers of R&D in industrial economies. Apart from the fact that it is dangerous to draw such a strong conclusion from a single study, it is not clear how relevant such a study is to the understanding the role of industrial policy in developing economies. For developing economies, where R&D plays at best a minor role, more important forms of spillover effects may be such things as the formation of a skilled labour force and the increase in generalised engineering capability, and therefore the result of the study on R&D spillover that the EAM cites has only limited relevance, even if it were true (for more details, see Chang, 1995, appendix).

Another problem with the empirical study presented in the EAM is that it suffers from a serious "identification problem". It has been already pointed out by Lall (1994) that the EAM classifies the industries at the 2-digit level, which is too coarse a classification to identify the activities that were promoted - typically, industrial promotion was targeted at a much lower level, sometimes even involving supports defined at the firm level. We can also say that such classification is at the same time too fine, because some major components of industrial policy, such as export promotion, was conducted at a much broader and cross-sectoral level.[9] However, there is a more fundamental dimension to this "identification problem", which is that the EAM did not bother to find out which industries, at whatever levels of classification, were *actually* promoted.

The statistical work conducted in the EAM is based on the notion that the East Asian governments promoted industries that had higher value-added or higher capital-intensity. However, the problem is that the choice of industries to be promoted in these countries was never made on simple criteria like "capital intensity" or "value-added component". Rather, the choice reflected a whole set of considerations, including, to name just a few, international market conditions, the availability of

[9] The EAM distinguishes industrial policy as a separate category from export promotion policy. However, this is not right because export promotion policy was a key element in the industrial policy regimes of the East Asian countries. New industries that the government wanted to promote almost invariably needed to have access to foreign exchanges in order to buy the new technologies and the equipments that embody them, and knowing this, the government saw export success as a prerequisite of industrial upgrading. Also see Rodrik (1994).

relevant domestic technological capabilities, and the net foreign exchange implication of promoting the industry concerned.

For example, the Korean textile industry, which the EAM regards as the quintessential "non-promoted" industry (p. 316), in fact received a lot of promotional supports even *after* the government launched its (in)famous Heavy and Chemical industrialisation programme in 1973 – it even had a special promotional law made for it in 1979. This was because of the industry's critical role as the main supplier of foreign exchanges (it was the largest export industry until well into the 1980s), which were necessary for the country to import capital equipments and buy technology licenses that were needed for the "infant" industries. Given this, the fact that the Korean textile industry was, according to the EAM, unusually large by international standards is a proof *not* of the failure of Korean industrial policy, as the EAM argues, but of its success (for more details, see Chang, 1995, appendix).

In other words, the EAM has classified industries into the promoted ones and the ones that were not, according to what they *thought* was the industrial policy practice in the East Asian countries, rather than according to what actually *was* the practice in these countries. Such disregard as to what was actually going on in the countries concerned is quite similar to its failure in the theoretical section to consider (if only to disapprove) the justifications behind some central components of industrial policy in these countries, such as coordination of competing investments, policy measures to attain scale economy, and the use of "protective" industrial policy.[10]

[10] Paying attention to these hitherto-ignored aspects of industrial policy makes our empirical tests more difficult. Traditionally, many studies have used indicators such as subsidies and tariffs in order to measure the extent of industrial policy in an industry (e.g., Lawrence & Weinstein chapter in this volume). However, recognising

2.3. The Replicability Problem

One important line of argument employed by the EAM against industrial policy was that the policy requires certain conditions in order to be successful and therefore that other countries which do not meet these conditions cannot use such policy.

Two kinds of arguments were made in this regard. First of all, it was argued that, in order to make industrial policy work even to the (allegedly) limited extent that it worked in East Asia, a country needs certain institutions, especially a highly capable bureaucracy like the ones we can only find in the Northeast Asian countries (Japan, Korea, Taiwan, Hong Kong, and Singapore). Secondly, it was pointed out that industrial policy is not feasible any more, because the new international trading regime that emerged out of the Uruguay Round of the GATT talks has made the tools of industrial policy that the Northeast Asian countries had used "illegal". How persuasive are these arguments?

2.3.1. Institutional Capability

The EAM argues that successful management of industrial policy, as one of those "selective" policies that go beyond the "fundamentals", requires certain unusual

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these additional aspects means that we also need to take into account less quantifiable things like the costs saved from coordination of competing investments and from measures to achieve scale economy, or the benefits from the acceleration of structural change that protective industrial policy may accord (which will be even more difficult to measure, as they are likely to spill over into the rest of the economy).

institutional capabilities that can rarely be found outside Northeast Asia. The report argues that effective implementation of "contests" among the recipients of state supports, which are necessary for a successful industrial policy, requires "the competence, insulation, and relative lack of corruptibility of the public administrations in Japan and Korea" (p. 102).[11] From this, the report concludes that the more market-oriented economies of Southeast Asia provides a better role model for other developing countries, for their success proves that there is a lot of mileage that countries with poor administrative and other institutional capabilities can derive from concentrating on achieving the "fundamentals", which does not require advanced institutional capabilities (macroeconomic stability, human resource development, agricultural development, among others).[12]

The problem with this argument is not so much that anyone seriously doubts whether an effective conduct of selective industrial policy (or for that matter, any policy) requires a bureaucracy that has the competence and the political influence to impose "hard budget constraints" on the recipients of state support according to relatively transparent rules. This proposition is in fact what many "revisionists" have repeatedly emphasised. So at that level there is really no dispute.

The problem is that the EAM is implicitly assuming that, the more "selective" a policy is, the more difficult it is to administer and thus more institutional "props"

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[11] The EAM also cites "the pragmatism and flexibility of governments" as another condition, but this subsequently plays a much less important role in the argument.

[12] The list of "fundamentals" in the EAM keeps changing, because it does not really have a good theory of which area of policy is more important and why. However, these three items are almost always included in the list.

(such as a good bureaucracy) it needs – or, to put it differently, the closer an economic system is to the *laissez faire* ideal, the easier it become to run it. Is this true?

First of all, well-functioning markets require institutional prerequisites as much as well-functioning policies require them, although of somewhat different kinds – developed contract law, an efficient capital market, and an effective dispute settlement mechanism, to name just a few - because, without these institutions, market exchange becomes very costly (Chang, 1997b). A successful modern free-market economy will also require highly capable *private sector bureaucracies* that can successfully manage large and complex firms. The enormous difficulties that many developing and transition economies are having in constructing the basic institutions of the market economy and the private sector bureaucratic capabilities are clear testimonies to the fact that more market-oriented economic systems are *not necessarily* easier to construct and run than more interventionist systems.

Secondly, in the same vein, it is not clear to me at all whether industrial policy necessarily requires a more capable bureaucracy than the “fundamental” policies. This will, for one thing, depend on the nature and the scale of the policies concerned. For example, is promoting a small number of relatively unsophisticated industries necessarily more difficult than, say, administering a large-scale primary educational programme? For another example, running a good macroeconomic policy in the face of a large (positive or negative) external shock is often a lot more difficult than running selective industrial policy (as the East Asian economies are finding to their chagrin these days). The point is *not* that industrial policy is necessarily more (or less) difficult to run than other policies, but that we cannot make a categorical statement about the ease or the difficulty of a particular type of policy without looking at the particular case at hand.

Thirdly, it is not clear whether the capable bureaucracies in Northeast Asia were the products of "highly unusual historical and institutional circumstances" (p. 366). At first sight, this seems more than reasonable. We all know that the Northeast Asian countries have behind them at least thousand (and more in the case of Chinese-speaking countries) years of history of meritocratic bureaucracy, and this surely must prove that these countries are highly unusual – or does it?

Let us start answering this question by first thinking about Singapore. Is it really the Confucian tradition that has made its bureaucracy what it is? At least to me, the principles that lie behind the Singaporean bureaucracy seem more British than Confucian. Take the case of Taiwan. When its bureaucracy was running mainland China before 1949, it already had the longest tradition of meritocracy and competitive recruitment in the world, but that did not prevent it from being one of the least competent and the most corrupt bureaucracies of the time. Did Korea always have an exceptionally competent bureaucracy? The Korean bureaucracy was also notorious for its incompetence and nepotism in the 1950s (Cheng et al., 1998), and it was sending its bureaucrats for training to countries like Pakistan and the Philippines even until the late 1960s. It was only through continuous efforts at civil service reform, and *not* as a result of history and tradition, that Korea managed to create a competent and relatively clean bureaucracy – this is a point that even the EAM gave a side glance (Box 4.4.).

The point is *not* that history and tradition does not matter, but that capabilities (and the institutions that embody them) can be built and destroyed a lot more easily than it is assumed in the EAM (and by many other people). It is true that the process of capability building often takes time, but this is not the same as saying that countries

which do not have high capability should never try “difficult” policies (such as industrial policy). Such capability can be, and has often been, built rather quickly, not least because there is also “learning-by-doing” in administration as in production. Institutions are, in other words, subject to imitation and innovation, as are technologies (Westney, 1987). Indeed, the Bank itself has later come around to accept, although still not wholeheartedly, the line of criticism that we deployed above, as we can see from its 1997 annual report that emphasised the need for state capability building (World Bank, 1997).

2.3.2. Changing International Trading Environment

The EAM cites the birth of the new international trading regime, following the conclusion of the Uruguay Round of the GATT talks and the birth of the World Trade Organisation (WTO), as a severe constraint on the use of the kinds of interventionist trade and industrial policy measures used by the Northeast Asian countries (p. 25, p. 365). While it accepts that there is some room for manoeuvre[13], its verdict on the effect of the WTO regime on developing country policy autonomy seems overly pessimistic.

[13] For example, the EAM does recognise that there is a time provision of up to 8 years for the developing countries to bring their trade policies in line with those practised in advanced countries (p. 365). It also acknowledges that there are other means than subsidies or export-directed credit programmes that may be used in order to promote export (p. 25).

To begin with, we should not exaggerate the additional constraints on trade and industrial policies that the WTO regime has brought about by talking as if everything was allowed under the pre-Uruguay-Round regime. The old regime also had a large number of restrictions on the range of acceptable policy instruments, and therefore the Northeast Asian countries had to exercise a lot of ingenuity in choosing the means of industrial policy and diplomatic skills to iron out problems with their trading partners.

Secondly, it should not be forgotten that the WTO regime is still an evolving system. We still do not fully know, a good few years after the launch of the WTO, how the abstract principles stated in its charter are going to be translated into practice. Its exact characteristics will be determined only with the accumulation of precedents over time, because, as any other legal system, its principles are stated in fairly general terms and therefore need to be actively "interpreted".

Thirdly, we need to point out that the restrictions on the use of subsidies in the WTO regime are not as binding as they are portrayed to be in the EAM and elsewhere. For one thing, there are subsidies which are perfectly legal (the so-called "non-actionable" subsidies) - these include "non-specific" subsidies and certain types of "specific" subsidies (those for basic R&D, agriculture, disadvantaged regions, and equipment upgrading to meet higher environmental standards). There are also subsidies which are "actionable" (e.g., the trading partner can impose countervailing duties) although not prohibited. However, in this case, the complaining country has to prove that the subsidy concerned has caused a "material damage", which is not easy especially when it concerns developing countries with tiny market shares. The only subsidies which are prohibited outright are subsidies that require their recipients to meet certain export targets or to use domestic goods instead of imported goods.

However, the poorest countries (defined roughly as countries with less than $1,000 per capita income) are in fact exempt from even this.

Fourthly, as in the pre-WTO regime, countries are allowed under the WTO regime to raise tariffs or introduce quantitative restrictions when they have balance of payments problems. Given that practically almost all of them are in a permanent balance of payments crisis, this provides a significant room for manoeuvre for the developing countries. Indeed, it was actually almost invariably on this ground, rather than under the infant industry provision of the GATT, that the East Asian countries imposed tariffs and quantitative restrictions that they used for infant industry promotion (Akyuz et al., 1998, p. 31). Of course, these measures are supposed to be commensurate to the scale of the balance of payments problem, which means that there is a clear restriction on the total magnitude of measures that can be used. However, the WTO expressly allows the individual countries to choose *where* to impose these measures (i.e., how they define “non-essential imports”), so there is actually a significant room for selectivity in the use of these measures, which is after all what the debate is about.

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To summarise, it is true that the WTO regime has put greater restrictions than before on the range of trade and industrial policy tools that are acceptable. However, the restrictions are by no means as wide-ranging and severe as the EAM suggests, and there is more room for manoeuvre for developing countries, especially the poorest ones which are given some special exemptions. Given that the pre-WTO world trading regime was by no means permissive, it seems doubtful whether the birth of the new international trading regime makes the past industrial policy practices in East Asia as irrelevant for other developing countries as they are argued to be.

3. The East Asian Crisis (and the Japanese recession) and Industrial Policy

The debate on East Asian industrial policy recently took a new turn following the continued recession in Japan and the economic crises in a number of other countries in the region.[14]

As we already pointed out in a number of places, many mainstream economists have until recently tried hard to deny the very existence of industrial policy in East Asia. Even many of those mainstream economists who acknowledged its existence (including the authors of the EAM) were basically arguing that it made few, if any, differences to the economies concerned. With the recent economic troubles in the region, however, many of those who denied the existence or the effectiveness of industrial policy in East Asia have made an intellectual U-turn, and argued that industrial policy was widespread and "effective" in the region – although effective in the negative sense of creating inefficiencies and encouraging excessive risk-taking (for a more comprehensive critique of this argument, see Chang, 1999).

Before we discuss the role of industrial policy in the East Asian crisis, we need to put this crisis into perspective. The point is that, while the scales of crisis in many countries in the region are truly mind-boggling, it is by no means the case that the whole region is falling apart. Taiwan is still going strong and Singapore has managed to keep its head above water. As for Japan, the problem seems more to be in

[14] For some comprehensive discussions of the East Asian crisis, see Radelet & Sachs (1998), Stiglitz (1998), Singh (1998), Furman & Stiglitz (1998), and Chang (1999).

perception than in reality (although this is not to say that therefore the recession can be ignored). True, during the 1990s, the country has been in the longest recession in its postwar history, but even then its relative performance vis-a-vis the US, which is supposed to have entered a new "Golden Age", seems quite respectable. For example, if we use the most updated World Bank data set, its average per capita GDP growth rate between 1990 and 1997 has been 1.0%, a rate which is not much below the 2.0% attained by the US economy. According to the *Economist*, between 1989 and 1998, the average per capita GDP growth rates in Japan and the US were in fact *identical* at 1.6%, and labour productivity growth rate was actually *higher* in Japan at 1.2%, compared to 0.9% of the US (*The Economist*, 10 April, 1999, p. 67). These figures suggest that the current recession of the Japanese economy by no means signifies the demise of an economic system.

The main difficulty with the argument that industrial policy was behind the Asian crisis is that it is in fact mostly the more market-oriented Southeast Asian countries and Hong Kong, rather than the industrial-policy states of Northeast Asia, that are in crisis. In the Japanese case, there is a widespread agreement that the recent economic problem was caused by poor macroeconomic policy, rather than industrial policy. Despite their industrial policy practices, Taiwan and Singapore are not experiencing crises. Of course, the inclusion of Korea, a well-known practitioner of industrial policy, in the list of crisis countries complicates things, but we begin to see a consistent pattern when we note that the Korean industrial policy was actually largely dismantled by the mid-1990s. Let us elaborate on this line of argument.

To begin with, let us look at the Southeast Asian countries. While the EAM certainly under-estimated the role that industrial policy played in these countries - it

played an important role in developing some natural-resource-related industries (e.g., see Jomo & Rock, 1998) – it is undeniable that industrial policy was not a major element in the policy regimes of the Southeast Asian countries. Thailand and Indonesia have had little industrial policy, except in agricultural processing industries in the case of Thailand and in a few "prestige" projects (e.g., aircraft) in the case of Indonesia. Malaysia has had a more systematic industrial policy, but it can hardly be described as the dominant factor in the country's policy regime in the way that it was in the Northeast Asian countries. Indeed, during the last decade or so, many observers of the Southeast Asian countries have argued that the absence of industrial policy is precisely why they were finding it increasingly difficult to upgrade their industry and export structures. In short, industrial policy could not have been a major factor behind the crises in the Southeast Asian economies, because there was, simply, little of it around. Indeed, it was the real estate investments that had nothing to do with industrial policy, rather than industrial investments, that led the Southeast Asian bubbles (see Henderson, 1998, for more details).

Then how about Korea? Isn't it one of the archetypal industrial-policy states and therefore a case proving the defects of industrial policy? The fact that the over-investments that caused the country's crisis was mostly in industries, rather than in real estate development as in the case of Southeast Asia, also seems to corroborate this argument.

However, contrary to the popular perception, industrial policy was largely absent in Korea in the build-up to the current crisis. Slowly from the late 1980s, but very rapidly from 1993 with the inauguration of the Kim Young Sam administration, the Korean government dismantled industrial policy, except for R&D supports in some high-technology industries (see Chang, 1998b, for further details). Therefore, it

is difficult to blame the Korean crisis on industrial policy as it was not around any more in any meaningful way.

In fact, we can go even further and argue that it was actually the *demise* of industrial policy, rather than its continuation, that was one major factor behind the current crisis in Korea (see Chang et al., 1998, and Chang, 1999 for further details). Most importantly, the end to the policy of investment coordination among competing firms (see subsection 2.2.1) allowed the proliferation of duplicative investments in the key industries that constituted one major cause of the crisis and are now the subjects of the so-called "Big Deal" industrial restructuring (see footnote 5 for some more details).

To summarise, contrary to the popular perception, the recent economic problems in East Asia do *not* show us that industrial policy was a major drag on the economies of the region. Above all, given the fact that there was little industrial policy around in the crisis countries (including Korea which largely dismantled such policy by the mid-1990s), it seems highly implausible to argue that such policy was responsible for the crisis. On the contrary, it can even be argued that it was the absence of such policy that contributed to the crisis at least in some of the countries concerned.

4. Some Thoughts on the Future of Industrial Policy in East Asia

So what is the future for industrial policy in East Asia? To some, this question may sound pointless, given the wide-ranging liberalisation measures that have been

instituted following the IMF packages implemented in the region, and also given, at least for the moment, the conversion of most governments in the region to the liberal cause.

However, formal laws and rules cannot fully determine the working of an economic system – after all, it was out of the very American formal institutional structures that the Occupation Authorities imposed after the Second World War that the "idiosyncratic" Japanese and German economic systems had developed. Moreover, policy needs and fashions change, and therefore it is not certain whether the governments in the region will maintain their current policy stances in the future. Therefore, I think it is still useful to explore the more structural economic and political trends to reflect on whether the governments in the region can use an activist industrial policy in the future, should their political commitments and vision change.

4.1. Economic Maturity

It has been popular during the last decade or so among the researchers of the more advanced East Asian economies (Japan, Korea, and Taiwan) to argue that the attainment of economic maturity in these economies has made industrial policy almost impossible to implement. There are two variants to this argument – one based on the problem of complexity, and the other based on the problem of uncertainty.

The complexity argument is that, with economic development, economies become more complex, and therefore it becomes more difficult to administer centrally. This argument is accepted as a truism by almost everyone, but I am not so sure whether I agree with it.

It is true that, other things being equal, a more complex problem increases the informational requirements of its successful policy solution, and therefore is more difficult to manage centrally. But the problem is that other things are *not* equal.

First of all, a more mature economy is likely to have a better administrative capability, if only because its bureaucracy will have had more opportunity to engage in "learning-by-doing". As we pointed out in section 2.3.1., it is not only in production activities where learning-by-doing exists. The implication is that even a relatively "simple" policy will be difficult to administer for developing country bureaucracies with low capability, while more advanced economies have bureaucracies which can deal with quite complex policies with ease.

Secondly, a more developed economy is typically better organised into larger and better-managed units (e.g., large modern corporations, producer associations, community organisations). This means that it is easier to implement a given policy in a more mature economy, as the latter is likely to have more effective "intermediate" enforcement mechanisms. Indeed, this was precisely one of the factors that Marx and his followers (including the anti-socialist Schumpeter) thought would make socialism increasingly feasible with economic development. The point can also be made from the opposite end. It is well known that industrial policies are typically very difficult to implement in industries where firms are very small and are not organised into industry or regional associations.

In short, a more mature economy typically (if not always) has more complex tasks at hand, but at the same time it typically has better capabilities (both at the governmental level and at the social level) to manage those tasks. Therefore, it is not clear whether centralised coordination through industrial policy becomes necessarily more difficult with economic development and maturity.

A related, but slightly different, line of argument is based on the problem of uncertainty, rather than complexity. The argument is that, when a country reaches the frontier of technological development, it becomes much more uncertain what the government should be doing to help the industry. I find this argument more compelling than the one based on complexity that we have just examined.

However, it is one thing to say that industrial policy becomes more difficult in "frontier" industries, and it is another to say that this makes industrial policy impossible in a mature economy. For one thing, most of the justifications of industrial policy that we reviewed above should hold for frontier industries too. Indeed, some of these justifications may become even stronger with economic maturity (e.g., learning externalities). Moreover, even in a frontier industry with genuine uncertainty about its future, there is no reason why an intelligent bureaucracy in close consultation with the private sector should not be able to identify the broad trends and provide support for certain types of productivity-enhancing activities. The best examples of the successful use of industrial policy in the frontier industries is provided by the experience of Japan during the 1980s and the early 1990s (e.g., see Okimoto, 1989, Fransman, 1990, and Weiss, 1995, for some examples).

Now, I must point out that this argument, which is very sensible in the context of some frontier industries in the most advanced economies, has been, unfortunately, liberally applied to situations which do not deserve it. Even in the most advanced countries like Japan, there are many industries that are still in a catch-up position. When it comes to economies like Korea and Taiwan, the argument is unconvincing. Despite what the locals, especially the Koreans, like to think, these economies are still good 2-3 decades behind Japan in almost all industries. Therefore, if industrial policy

worked well in Japan as late as the late 1980s and the early 1990s, it should work for Korea and Taiwan in the early decades of the new millennium, if not necessarily beyond. It is needless to say that the argument is basically irrelevant when it comes to the Southeast Asian economies.

To sum up, the first variety of the "maturity" argument – namely, the complexity argument – does not seem compelling to me. As economies mature, policy implementation capability increases both at the governmental and at the "intermediate" levels, and therefore it is not clear whether they necessarily become more difficult to manage centrally. The second variety - namely, the uncertainty argument – is more convincing, but its applicability is pretty limited – it applies basically only to Japan among the East Asian countries. Moreover, even with an overall economic maturity, a country will still have a lot of industries where the technological capability has not reached the world's frontier. And even in those industries at the frontier, the more sensible solution is often not the abandonment of industrial policy but the modification in its form, as the Japanese experience since the 1980s show.

4.2. Democratisation

It has long been argued that interventionist industrial policy requires strong states which can over-ride sectional interests. Therefore, it is argued, increasing democratisation of the East Asian countries during the last decade or so should make such policy politically less acceptable and therefore less feasible. This is argument is

used especially in relation to countries like Korea and Taiwan, which have recently gone through a substantial degree of democratisation.

However, it is not clear to me whether industrial policy is incompatible with a democratic polity. Countries like France, Japan, Austria, Norway, and Finland, whose democratic credentials and consensus-orientation in politics during the postwar period no one will dispute, have all successfully used industrial policy in one way or another. In fact, one can go one step further and even argue that, if there is a democratic consensus on it (as it had been in the above-mentioned countries), industrial policy can be even more effectively implemented, given that every policy requires for its long-term success some degree of consent by those who are going to be affected by it (see Weiss, 1995, ch. 2, for a similar argument).

In my view, what seems to be creating the impression that democracy and industrial policy are mutually incompatible is the fact that industrial policy in Taiwan, and especially Korea, has lost its political legitimacy in the eyes of the population because of its past association with dictatorship. However, there is no inherent reason why industrial policy cannot re-gain its legitimacy even in these countries, if a democratic political consensus can be built around it. While it may be argued that at least in Korea there is no chance of that happening in the near future, but this is an argument which is based on an assessment of the present political situation in the country, and therefore has to be distinguished from the argument that industrial policy is inherently incompatible with democracy.

To summarise, the association between industrial policy and authoritarianism in the minds of the observers of certain East Asian countries is understandable, but this association is a product of history, rather than the manifestation of some

underlying law. If we applied the same logic to the experience of the 19th century Britain, USA, or some European countries, we would have probably concluded that a free market policy was incompatible with democracy, which is indeed what most Liberals of the time thought to be the case (on the earlier view on the relationship between democracy and liberalism, see Bobbio, 1990; also see Polanyi, 1957).

4.3. Changing Balance of Power between the Government and the Private Sector

Throughout their economic development, but especially more recently, the East Asian countries have witnessed the rise of large private sector industrial and financial corporations, and their increasing internationalisation. This has prompted many people to argue that industrial policy that restricts private sector interests will not be possible any more, as the private sector firms now have enormous political influence, given the weight that they have in the economy and also given their ability to veto government policy by "exiting" from the domestic economy.

The argument obviously makes a lot of sense. Corporations which have become economically and politically more powerful and have more freedom to move around the world certainly would be, other things being equal, better able to resist government policies that sacrifice their individual interests for the sake of national goals. And indeed in Korea, the giant conglomerates (the *chaebols*) have aggressively campaigned during the 1990s to convince the population that the government should abandon its industrial policy and financial regulations.[15]

[15] In 1996, the Korea Federation of Industries, the association of the *chaebols* prepared a report arguing for the abolition of all government ministries except the

However, we need to be careful in jumping from such observation to the conclusion that economic development means the rise of the private sector, which, when combined with globalisation, makes industrial policy impossible.[16]

The problem here is that it is not clear whether there is an inevitable association between economic development, the rise of the private sector, and the demise of industrial policy. For one thing, the experience of Taiwan shows that economic development need not lead to the emergence of a powerful private sector, as the process of corporate development is as much a political process as an economic process (Fields, 1995). The Japanese experience is also consistent with such observation. The Japanese corporations had already become very powerful and internationally mobile during the 1970s and the 1980s, but Japan had great success with industrial policy during that period, because these firms accepted the legitimacy of industrial policy and cooperated with the government for its success.

Moreover, it needs to be pointed out that the extent of internationalisation of even the largest corporations in East Asia is still limited. Telling from the experiences

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ministries of defence and foreign affairs and for the consequent reduction of government staff by 90%. The report had to be officially withdrawn because it was unfortunately leaked in advance by a careless reporter and created a popular uproar. While the chance of such proposal being taken seriously was non-existent even in Korea that was then (and still is to a large extent) in the grip of an anti-statist reaction, but the incident is illustrative of the aggressiveness that the *chaebols* were showing in pushing for greater business freedom in the recent period.

[16] For a comprehensive critique of the argument that globalisation makes industrial policy impossible, see Weiss (1998). Chang (1998a) makes a similar argument more specifically in relation to the rise of transnational corporations.

of other countries with longer history of internationalised business, the chance that they will turn into truly "transnational" corporations without a "home base" in the foreseeable future is low. When we also note that globalisation is a trend that can be, and has been (in the aftermath of the Great Depression), reversed, it is not clear whether the current process of globalisation will continue until it makes industrial policy impossible.[17]

So, in the end the argument that industrial policy has become less feasible in East Asian countries because their economic development has led to the growth in the power of the private sector, which naturally resist industrial policy, is problematic. It may fit the Korean example rather well, but as a general proposition, it is rather suspect. This is because there is no direct causal link between economic development and the rise of the private sector (recall the Taiwanese counter-example), on the one hand, and between the rise of the private sector (including its internationalisation) and the demise of industrial policy (recall the Japanese counter-example), on the other hand.

[17] The world economy was almost as globalised in the late 19th and the early 20th centuries as it is now on many indicators, and on some indicators even more. For example, international labour mobility was much higher then and international policy uniformity was much greater then - especially given the Gold Standard and the lack of tariff autonomy in all countries except the strongest (even Japan did not have tariff autonomy until 1899). See Bairoch & Kozul-Wright (1996) for the historical evidence.

5. Concluding Remarks

So what are the main conclusions that we can draw from our "re-thinking" on the issue of industrial policy in East Asia?

First of all, there are more theoretical justifications for industrial policy than acknowledged by the EAM, and we need to explore these issues deeper. This is important, especially given that those justifications (e.g., coordination of competing investments, scale economy) were probably more important in the actual formation of industrial policy in the East Asian countries than the ones acknowledged by the EAM (e.g., "Big Push", formation of implicit cartels in international negotiations).

Secondly, we need to think much harder to find the ways to test the true effects of industrial policy. Apart from the detailed methodological criticisms that have already been made of the tests conducted on the issue in the EAM, which we did not have the space to summarise, there remain some issues that we need to resolve in future research. For example, how should we deal with the problem of externalities? Whether and how do we, for another example, quantify the effects of policies such as the achievement of scale economy through licensing policy, the prevention of a price war through the encouragement of a recession cartel, or the reduction in the resistance to technological change in the long run through the use of "protective" industrial policy? These are only some of the questions that we need to explore and debate further before we can be confident about our empirical studies, if we ever can be.

Thirdly, the capability argument used by the EAM against other countries wanting to adopt East-Asian-style industrial policy is not without its merits, but, it has important limitations. First of all, it is not clear why industrial policy regardless of its scale and sophistication requires an exceptionally competent bureaucracy. And,

secondly, bureaucratic capability is something that can be accumulated through deliberate efforts and learning-by-doing. It should be also added that, it is not as if more market-oriented systems do not require high institutional capabilities, as we can see in the difficulties that many transitional and developing economies are currently experiencing in establishing a “free market system”.

Fourthly, the WTO argument against the feasibility of industrial policy in the present era, which was also emphasised by the EAM, draws an overly pessimistic conclusion without looking at the full array of possibilities that exist for policy manoeuvre.

Fifthly, as for the argument that the recent recession in Japan and crises in other East Asian countries prove that industrial policy has been in the end detrimental for these economies, it should be pointed out that it is actually the countries which did not have or ditched industrial policy that are in crisis.

Lastly, as for things like economic maturity, democratisation, and the rise of the private sector power, which are frequently cited as reasons why industrial policy will not be feasible any more even in the countries that have successfully used it, we argue that they presuppose causal links which are not robust and are not really backed by empirical evidence.

While I confess to be an un-reconstructed interventionist (but *not* of a naïve kind, I believe), I do respect other people who believe that things like industrial policy are politically objectionable and economically infeasible. In this paper, I tried to make these people “re-think” their positions by showing some theoretical and empirical problems with the prevailing view on East Asian industrial policy. I do not have the illusion that many of these people will convert to a new cause because of my paper,

but it will have been worth my effort if it has made some of them realise that there are still many issues that need to be settled in the area and we need further research on them.

References

Akyuz, Y., Chang, H-J. & Kozul-Wright, R. 1998. New Perspectives on East Asian Development, *Journal of Development Studies*, vol. 34, no. 6..

Amsden, A. 1985. The State and Taiwan's Economic Development in P. Evans, D. Rueschemeyer & T. Skocpol (eds.), *Bringing the State Back In*, Cambridge, Cambridge University Press.

Amsden, A. 1989. *Asia's Next Giant*, New York, Oxford University Press.

Amsden, A. & Singh, A. 1994. The Optimal Degree of Competition and Dynamic Efficiency in Japan and Korea, *European Economic Review*, vol. 38, nos. 3/4

Badaracco, J. & Yoffie, D. 1983. "Industrial Policy": It Can't Happen Here, *Harvard Business Review*, November/December.

Bairoch, P. & Kozul-Wright, R. 1996. Globalisation Myths: Some Historical Reflections on Integration, Industrialisation and Growth in the World Economy, UNCTAD Discussion Paper, no. 113, Geneva, United Nations Conference on Trade and Development (UCTAD).

Balassa, B. 1982. Development Strategies and Economic Performance in B. Balassa et al., *Development Strategies in Semi-Industrial Economies*, Baltimore, The Johns Hopkins University Press.

Balassa, B. 1988. The Lessons of East Asian Development: An Overview, *Economic Development and Cultural Change*, vol. 36, no. 3, Apr. 1988, Supplement.

Bhagwati, J. 1988. *Protectionism*, Cambridge, Mass., The MIT Press.

Bobbio, N. 1990. *Liberalism and Democracy*, London, Verso.

Chang, H-J.. 1993. The Political Economy of Industrial Policy in Korea, *Cambridge Journal of Economics*, vol. 17, no. 2.

Chang, H-J. 1994. *The Political Economy of Industrial Policy*, London and Basingstoke, Macmillan.

Chang, H-J. 1995. Explaining 'Flexible Rigidities' in East Asia in T. Killick (ed.), *The Flexible Economy*, London, Routledge.

Chang, H-J. 1997a. Luxury Consumption Control and Industrialisation in East Asia, mimeo., a background paper prepared for *Trade and Development Report 1997*, UNCTAD, Geneva.

Chang, H-J. 1997b. The Economics and Politics of Regulation, *Cambridge Journal of Economics*, vol. 21, no. 6.

Chang, H-J. 1998a Transnational Corporations and Strategic Industrial Policy in R. Kozul-Wright & R. E. Rowthorn (eds.), *Transnational Corporations and the World Economy*, London and Basingstoke, Macmillan Press.

Chang, H-J. 1998b. Korea: The Misunderstood Crisis, *World Development*, vol. 26, no. 8.

Chang, H-J. 1999. The Hazard of Moral Hazard – Untangling the Asian Crisis, a paper presented at the American Economic Association Annual Meeting, 3-6 January, 1999.

Chang, H-J., Park, H-J. & Yoo, C. G. 1998. Interpreting the Korean Crisis: Financial Liberalisation, Industrial Policy, and Corporate Governance, *Cambridge Journal of Economics*, vol. 22, no. 6.

Chang, H-J. & Rowthorn, R. 1995. Role of the State in Economic Change: Entrepreneurship and Conflict Management in H-J. Chang & R. Rowthorn (eds.), *Role of the State in Economic Change*, Oxford, Oxford University Press.

Cheng, T., Haggard, S. & Kang, D. 1998. Institutions, Economic Policy, and Growth in the Republic of Korea and Taiwan Province of China, *Journal of Development Studies*, vol. 34, no. 6.

Dore, R. 1986. *Flexible Rigidities: Industrial Policy and Structural Adjustment in the Japanese Economy 1970-80*, London, The Athlone Press.

Evans, D. & Alizadeh, P. 1984. Trade, Industrialisation, and the Visible Hand, *Journal of Development Studies*, vol. 21, no. 1.

Evans, P. 1995. *Embedded Autonomy - States and Industrial Transformation*, Princeton, Princeton University Press.

Fields, K. 1995. *Enterprise and State in Taiwan and Korea*, Ithaca, New York, Cornell University Press.

Fishlow, A., Gwin, C., Haggard, S., Rodrik, D. & Wade, R. 1994. *Miracle or Design? - Lessons from the East Asian Experience*, Overseas Development Council Washington, D.C..

Fransman, M. 1990. *The Market and Beyond: Information Technology in Japan*, Cambridge, Cambridge University Press.

Furman, J. & Stiglitz, J. 1998. Economic Crises: Evidence and Insights from East Asia, a paper presented at the Brookings Panel on Economic Activity, 3-4 September, 1998, Washington, D.C..

Henderson, J. 1998. Uneven Crises: Institutional Foundations of East Asian Economic Turmoil, Transational Communities Working Paper, WPTC-98-13, Faculty of Anthropology and Geography, University of Oxford.

Johnson, C. 1982. *MITI and the Japanese Miracle*, Stanford, Stanford University Press.

Johnson, C. (ed.) 1984. *The Industrial Policy Debate*, San Francisco, Institute for Contemporary Studies.

Jomo, S.K. & Rock, M. 1998. Economic Diversification and Primary Commodity Processing in the Second-tier South-East Asian Newly Industrialising Countries, UNCTAD Discussion Paper, no. 136, United Nations Conference on Trade and Development (UNCTAD), Geneva.

Jones, L. & Sakong, I. 1980. *Government, Business and Entrepreneurship in Economic Development: The Korean Case*, Cambridge, Massachusetts, Harvard University Press.

Kwon, J. 1994. The East Asia Challenge to Neoclassical Orthodoxy, *World Development*, vol. 22, no. 4.

Lall, S. 1994. Does the Bell Toll for Industrial Policy?, *World Development*, vol. 22, no. 4.

Little, I. 1982. *Economic Development*, New York, Basic Books.

Luedde-Neurath, R. 1986. *Import Controls and Export-Oriented Development; A Reassessment of the South Korean Case*, Boulder and London, Westview Press.

Magaziner, I. & Hout, T. 1980. *Japanese Industrial Policy*, London, Policy Studies Institute.

Okimoto, D. 1989. *Between MITI and the Market: Japanese Industrial Policy for High Technology*, Stanford, Stanford University.

Polanyi, K. 1957. *The Great Transformation*, Boston, Beacon Press.

Radelet, S. & Sachs, J. 1998. The East Asian Financial Crisis: Diagnosis, Remedies and Prospects, *Brookings Paper on Economic Activity*, 1998, no. 1.

Ranis, G. & Fei, J. 1975. A Model of Growth and Employment in the Open Dualistic Economy: The Cases of Korea and Taiwan in F. Stewart (ed.), *Employment, Income Distribution, and Development*, London, Frank Cass.

Reich, R. 1982. Why the US Needs an Industrial Policy, *Harvard Business Review*, January/February.

Renshaw, G. 1986. *Adjustment and Economic Performance in Industrialised Countries: A Synthesis*, Geneva, International Labour Office (ILO).

Rodrik, D. 1994. King Kong Meets Godzilla in A. Fishlow et al., *Miracle or Design? - Lessons from the East Asian Experience*, Washington, D.C., Overseas Development Council.

Schultze, C. 1983. Industrial Policy: A Dissent, *The Brookings Review*, Fall.

Singh, A. 1994. 'Openness' and the 'Market-friendly' Approach to Development: Learning the Right Lessons from Development Experience, *World Development*, vol. 22, no. 12.

Singh, A. 1998. Financial Crisis in East Asia: "The End of the Asian Model?", Issues in Development Discussion Paper, no. 24, Geneva, International Labour Office.

Stiglitz, J. 1998. Sound Finance and Sustainable Development in Asia, keynote address to the Asia Development Forum, jointly organised by the World Bank and the Asian Development Bank, 9-12 March, 1998, Manila, the Philippines.

Telser, L. 1987. *A Theory of Efficient Cooperation and Competition*, Cambridge, Cambridge University Press.

Thompson, G. (ed.) 1989. *Industrial Policy: US and UK Debates*, London, Routledge.

Wade, R. 1990. *Governing the Market*, Princeton, Princeton University Press.

Weiss, L. 1995. *The Myth of the Powerless State*, Cambridge, Polity Press.

Westney, E. 1987. *Imitation and Innovation: The Transfer of Western Organisational Patterns to Meiji Japan*, Cambridge, Cambridge University Press.

Williamson, O. 1985. *The Economic Institutions of Capitalism*, New York, The Free Press.

World Bank 1993. *The East Asian Miracle*, New York, Oxford University Press.

World Bank 1997. *World Development Report 1997*, Oxford, Oxford University Press.