INVITED EMINENT PAPER SERIES

INDUSTRIAL POLICY IN A GLOBALIZED AGE — LESSONS FROM EAST ASIAN EXPERIENCE

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INDUSTRIAL POLICY IN A GLOBALIZED AGE — LESSONS FROM EAST ASIAN EXPERIENCE

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Not only the wealth, but also the independence and security of a country appear to be materially connected with the prosperity of manufactures. Every nation, with a view to these great objects, ought to endeavor to possess within itself all the essentials of national supply.

Alexander Hamilton, Report on Manufactures, December 5, 1791

Keywords: Industrial policy; WTO; coordination failure; information asymmetry; East Asia.

1. Introduction

Much of the well-being of a society rides on the cross-sector allocation of its economic activities. This is as true now as in Hamilton’s day for societies like America in the late 18th century, and for Singapore today. For example, it is the national goal of that latter city-state to keep its manufacturing sector not lower than a certain level. On such an issue, each state takes a definite policy stance — to let nature take its course, to consciously master its own fate by policy, or to improvise as needs arise.

In the economic literature, policies for cross-sector allocation conventionally fall under the title of industrial policy. Many misconceptions have plagued this topic, during both its meteoric rise of public and professional fascination and its subsequent collapse of interest. More will be said later.

Among all economic topics, industrial policy is as essential as any other. It is also as elusive. The situation is intrinsically complex because one must demarcate both what the state should and can do. Whether the government should get involved is an analytic issue of whether or not there is coordination failure in advancing the national interest (Itoh et al., 1988). Whether the government can realize its goal depends on the pragmatic matter of whether it will cause formal foreign complaints in the era of GATT/WTO. Compounding the problem is the pedagogic question of what a proper tool for industrial policy is and what it is not (Johnson, 1982, p. 7; Komiya, Okuno and Suzumura, 1984, pp. 2–4; Chang, 1994, pp. 58–60; Amsden and Hikino, 2000, pp. 108–111). This has become a serious
concern. In recent East Asia, the state often uses intentionally unconventional tools for the conventional ends of industrial policy, with great success. These tools also happen to attract less formal complaints when compared against the conventional instruments for industrial policy. On the other hand, obviously, one cannot include every public measure under the sun as industrial policy. For example, education affects different sectors differently, but in deciding education policy, sectoral allocation is usually neither the sole nor the controlling concern. To review what the state should and can do, this essay adopts a broad working definition for policy tools according to their actual or possible use by intention, and not whether they were designed for other purposes, like macro-economic management or the maintenance of social welfare.

**Definition 1.** A tool for industrial policy is that which is, or can be, used intentionally to overcome coordination failure in cross-sector allocations.

Following this, one can then introduce the following:

**Definition 2.** An industrial policy is a contingent plan of the state, selecting the best tool for the current circumstance to pursue a given national agenda.

As argued by Wan (2004), policy tools are adaptively chosen to fit the evolving circumstance, in accordance to a given national agenda. This is how a coherent government stance arises from the trial-and-error choices of the improvisations by the officials.

Clarity is not helped by the fact that industrial policy is inseparable from the passion of nationalism in both the press and the street. Regarding its origin and nature, as well as its continued relevance, it is perhaps one of the most misunderstood concepts. There is much cause to rethink this topic. In the complex problem of deciding what is pragmatic, insight is important beside theory. Thus, for a thoughtful discussion of industrial policy, historical context is as important as conceptual depth.

More broadly, what identifies science is its insistence on replication; what challenges social studies is the dearth of experimental opportunity. Thus, in the search for generally applicable regularities, social scientists treasure comparative development, especially those of fast pace. In the last six decades, various East Asian economies have developed rapidly along divergent paths (Feenstra and Hamilton, 2006). Their experience provides a precious window into the workings of economics, especially in such complex and vitally important areas like industrial policy.

Section 2 below reviews various common perceptions on industrial policy. Sections 3 and 4 discuss various cases of the East Asian experience to highlight how externalities are internalized and which policy instruments remain available under the rules prevailing in the age of the WTO. Sections 5 and 6 offer some concluding observations.

### 2. Some Commonly Held Perceptions

There are three types of common perceptions about industrial policy, regarding its historical origin and its nature on the one hand, and its continued relevance on the other.
(i) Industrial policy has its *origin* in the practice of the Japanese Ministry of International Trade and Industry (MITI). Thus, “the Japanese economy stumbled, … and interest in industrial policy evaporated” (Kikkawa and Hikino, 1999, p. 19).

(ii) The *nature* of industrial policy is diametrically opposed to the Smithian precept of laissez faire. In its interventions, industrial policy depends on the superior ability and information of government officers *vis-à-vis* their private sector counterparts. Thus, “the tide of public policy … had … shifted … Behind this change were the historical collapse of socialist economies and the revitalization of the US economy, widely attributed to deregulation and liberalization” (Miyajima, Kikkawa and Hikino, 1999, p. 2).

(iii) Industrial policy is by and large made *irrelevant* by the GATT/WTO regime. Foreign complaints arise against the beggar-thy-neighbor effects of its instruments.

By logic and facts, some of these statements are entirely false, and others only partly true. This situation cannot be left alone. Clarification is needed point by point.

(i) Regarding its *origin*, so far as the history of the Japanese MITI is concerned, the name industrial policy came late, around 1970. At the height of MITI’s activism in the 1950s and 1960s, industries were shepherded by their respective and mutually competing *genkyoku* (原局 or corresponding bureau), each in its own improvising mode (see Komiya, Okuno and Suzumura, 1984, pp. 2–3 and 13–14). Overall, their spirit accords well with the blueprint that was presented more than a century and a half earlier by Hamilton, and realized in piecemeal in America. The same can be said about the German protectionism inspired by List (1841), an ardent admirer of Hamilton. Given the inter-industry variations in Japanese policy and considering the country-specific differences in comparing with America and Germany, one might argue that conceptually, industrial policy is as much made in America (or Germany) as in Japan. If in the 20th century, Japan pursued certain policies for “industry promotion” and America did not, that might be partly explained by the fact that America passed that same phase during the 19th century.¹

Moreover, as the Japanese economy graduates from the “high growth” phase, its per capita real income and employment rate are still every bit as respectable as most of the large European economies.

Now, if the Japanese economy has performed credibly relative to most of the OECD members, and if in principle and action, the Japanese stance on industrial policy is not that different from its American (or German) counterpart at the similar stage of development, one might question the veracity of the statement, “the Japanese economy stumbled”, let alone the validity of any effort to link the merits of industrial policy to the economic performance of Japan, either in comparison with contemporary America, or on its own.

¹See Chang (2003) for his similar views and evidence on British and American industrial policies, during their own catching-up phases.
(ii) Regarding its nature, one must note that, as an avid reader of the *Wealth of Nations*, Hamilton preferred free trade. He argued the need for government activism only to free entrepreneurs from “the fear of want of success in untried enterprise; the intrinsic difficulties incident to first essays toward competition who have already attained to perfection in the business to be attempted” (Chernow, 2004). This should sound familiar to the readers of Itoh et al. (1988, pp. 43–54), where set-up cost and the effect of learning-by-doing are both justifications for policies of industry promotion, under the guiding principles of Mill, Bastable, Kemp and Negishi. Thus, the purpose of industrial policy is to remedy coordination failure and internalize externalities. According to Samuelson (1969), externalities are equivalent to the case of public goods, and the provision of public goods by the state is enshrined in Adam Smith (1776). Therefore, industrial policy is not incompatible with *laissez faire*.

In principle, industrial policy calls for well-designed institutions, including the industry promotion conferences, administered by effective and impartial officers of the state. To discharge their umpire-like role, what is needed from public employees is their “good office”, and not their superior ability and information as “backseat drivers” over the average corporate management. Thus, the failure of planned economies has little logical relevance to the promise of industrial policy.

One might note that by historical coincidence, in the early years after World War II, most officials in the newly formed Japanese MITI graduated from the same schools as the managers of the large corporations in the newly formed *keiretsu* system, but with better grades. This may explain the effectiveness of *gyosei sido* (administrative guidance). At any rate, the logic and motive of that practice were ridiculed by Komiya, Okuno and Suzumura (1984), and its effectiveness was disputed by Miwa (1996).

(iii) Regarding its continued relevance under the recent influence of the GATT/WTO, one may readily agree that many of the conventional tools for industrial policy, like export promotion or restrictions of import and foreign investment, may cause foreign complaints. But, if industrial policy is understood as any deliberate policy to transform the sectoral structure of an economy, then such a practice is certainly very much alive today in East Asia, as well as elsewhere in the world (Masuyama et al., 1997). Few can deny that industrial policy is in use in Singapore, with its policy goal of keeping the manufacturing share of GDP no less than 20%, in spite of having only a Lilliputian domestic market. Except for the brief use of tariffs to preserve jobs after its separation from Malaysia, it has never adopted the conventional tools of industrial policy for export promotion or import substitution (Huff, 1994). By studying Singapore, the current policy of Mainland China may become more understandable.

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3 For the Chinese commitments upon its accession to WTO and the monitoring of the appliance, see respectively Yang (2006) and Prime (2006).
Both simultaneously promote foreign direct investment (FDI) and run up sizable export surpluses, year after year.

Taking the broader view, important elements of industrial policy used in Taiwan do not rely on restrictions of trade and investment (Tung, 2001), and may not be excluded by WTO rules. As will be seen later, the same holds true for Korea and Japan, although to a much lesser extent.

3. An Analytical Recapitulation

To help identify which policy instruments may cause trade friction and which will not under today’s globalized environment, consider a world of \( M \) individual agents, the first \( N \) of which are citizens of State \( H \) (“The Home Country”). Let \( u^0(i) \) be the payoff of individual \( i = 1, 2, \ldots, M \) in the status quo.

(a) Suppose policy \( g \) of \( H \) causes a payoff profile \( u^g(i) = \{u^g(i) : 1 \leq i \leq M\} \) in situation \( s^g \) which (weakly) benefits all individuals \( i = 1, 2, \ldots, B \), with \( N \leq B \leq M \). That is,

\[
    u^g(i) \geq u^0(i), \quad \text{for all } i = 1, 2, \ldots, B.
\]

This also means,

\[
    u^g(i) \geq u^0(i), \quad \text{for all } i, 1 \leq i \leq N
\]

(Pareto improvement for all “home” individuals).

(b) Further, unless prevented by \( g \), there is a set of individuals, \( C = \{i : 1 \leq c \leq N\} \), which can “block” \( s^g \), in that they will act against it to make themselves better than under \( u^g \)

(Policy \( g \) is needed against coordination failure).

(c) \( g \) is intentionally used for cross-sector reallocations.

Since they pertain to sectoral reallocation of activities, one can denote the collection \( G \) of all such policies as the class of industrial policies.

Note that statement (a) provides room to include policies attracting foreign investors, \( i \), for \( N < i \leq B \); statement (b) focuses on the economic (rather than military, as was part of Hamilton’s initial intent) justification for industrial policy; and statement (c) rules out such policies providing law and order.

The taxonomy in Table 1 helps to define what we mean as industrial policy here.

Next, to be specific, what limit instruments for industrial policy in the current era of GATT/WTO are foreign complaints of provable injury from direct restrictions (or interventions) in trade and investment. The two examples in the simple model below suggest what policies are likely to remain unchallenged.

\[\text{Amsden and Hikino (2000, p. 104) have pointed out that WTO rules “are flexible and allow countries to continue to promote their industries under the banner of promoting science and technology”}\]
Table 1. A Taxonomy about Industrial Policy

<table>
<thead>
<tr>
<th>Economic Justification — Against Coordination Failure</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentional stance for cross-sectoral reallocations</td>
<td>Yes</td>
<td>Government instruments for industrial policy</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Security of resource supply for politico-military needs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Government measures with cross-sectional implications e.g., education</td>
</tr>
</tbody>
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3.1. A simple model

Consider a world with two goods produced with a technology that is (extended) Ricardian, where $x$ is the “good of interest”, with unit price $p$, and $y$ is the numeraire. Each individual has one unit of labor, measured in efficiency units. By the choice of units for outputs and the universal input (labor), the production set for the rest of the world is

$$X^* + Y^* = L^* = M - N > 0,$$

where $X^*$, $Y^*$ and $L^*$ are the quantities of the two outputs and labor. Measured in “efficient units”, the home country has labor

$$L = N > 1 \text{ units},$$

so that the output per unit labor for the numeraire good is also 1.

In terms of “efficient labor”, using the “$a$-process” and the “$b$-process” respectively, the potential and current levels of unit labor output for $x$ are $a$ and $b$,

$$\left(\frac{3}{2}\right) > a > 1 + \frac{1/2}{N}, \quad \text{and}$$

$$1 > b > 0.$$  \hspace{1cm} (3)

It takes half a unit of labor for R&D over one unit of time to acquire the technology for the home country to use the “$a$ (for advanced) process” rather than the “$b$ (for backward) process”, and this result will then be automatically known to all $N$ firms for all future periods.

From Equations (3) and (4), one has,

**Lemma 1 (Mill’s Criterion).** The home country has potential comparative advantage in $x$, and current comparative advantage in $y$.

All individuals share the same periodic felicity index

$$u = (xy)^{1/2},$$

so that an individual with income $z$ has the indirect utility

$$v(p; z) = \frac{z}{2(p)^{1/2}}.$$  \hspace{1cm} (6)

The discount factor is 1/2 per period.
The relative size of labor supply is such that

\[ 1 > \frac{L}{L^*} = \frac{N}{M - N} < \frac{1}{a}. \]  

(7)

From Equations (5) and (7), it is immediate that one has,

**Lemma 2.** The home country satisfies the “Small Country” property. The world terms of trade between the two goods is always 1:1, whatever \( H \) does.

Lemma (2) and Equation (3) together yield,

**Lemma 3 (Bastable’s Criterion and Kemp’s Criterion).** To realize its potential comparative advantage with R&D, the home country takes on a project when

- The Marginal Social Benefit > The Marginal Private Cost (Bastable’s Criterion),
- > The Marginal Private Benefit (Kemp’s Criterion).

By Lemmas 2 and 3, one has now established by example,

**Proposition 1.** Industrial policy need not be a beggar-thy-neighbor policy

\[ u^s(i) \geq u^0(i), \quad \text{for all } i = 1, 2, \ldots, N, \]

and

\[ u^s(i) \geq u^0(i), \quad \text{for all } i = N + 1, N + 2, \ldots, M. \]

The equilibrium terms of trade is exactly the same as before, so that the welfare level of all price-taking individuals outside the home country cannot be affected in any way at all.

Three remarks are in order. First, the above model vouchsafes the relevance of the criteria of Mill, Bastable and Kemp in the general context, although historically these concepts arose for infant industry protection.

Second, it also highlights a concept central to the literature of industrial policy — to create dynamic comparative advantage. To wit, the adoption of industrial policy is both necessary and sufficient to realize the potential of an economy, in reversing the comparative advantage.

Finally, at times when country \( H \) is small as in Lemma 2, it is possible to justify its industrial policy, since there is no injured party. Yet, infant industry protection is not provided for under the WTO rules, which emphasize market access. The latter allows for complaints against the use of tax concessions, because of the general stance against subsidies.

It is important to note that the form industrial policy takes can vary from case to case.

**Case 1 (Government-sanctioned quality control).** Cheng (2001) reports that to keep a reasonable quality standard, an association of Taiwanese shoe-makers agreed among themselves to initiate export quality inspection and petition the government to implement with public authority. In this case, the initiative was taken by private individuals; the government officials only contributed their “good office”.


Case 2 (Government-funded pre-competitive research). The Industrial and Technological Research Institute (ITRI), founded by the government in 1973, has played a vital role in the formation of a number of high-tech industries in Taiwan, such as semiconductor and optoelectronics (Tung, 2001).

Foreign complaint can be avoided, as long as the government-owned firm supplies the domestic market at the world price.

Case 3 (Government-invested enterprises). The Meiji Government constructed and owned the Yawata Iron Works, which greatly expanded Japan’s heavy industrial sector (Yonekura, 1994; Morishima, 1982).

Case 3 resembles Case 2 in that it also generates information that benefits the private firms which arise later, by privatization or competitive entry, often with higher efficiency. This is a case to be returned to later.

Consider next a variation of the above case, where the realization of potential comparative advantage calls for foreign participation.

Case 4 (Government-induced FDI). Komiya (1972) gives examples of American and German investments in the Japanese automobile and electric machinery industries.

How indispensable such foreign participation may be is demonstrated in the case of electric machinery industry (Uchida, 1991). The arrangement must be sufficiently rewarding for the foreign partners. In the notation used above, this corresponds to cases where under the adopted industrial policy \( g \), the class of “beneficiaries” includes individuals \( i = N + 1, N + 2, \ldots, B \), with \( B > N \).

One may note that the single most important omission in the traditional literature of industrial policy is that, in its preoccupation over national interest, it has lost sight of the opportunities in inducing the participation of some foreign nationals (like multinational corporations, or MNCs) in programs which advance the national agenda. Such policy measures are often encouraged by the sponsors of globalization, and therefore avoid the possibility of foreign complaints. Formally, one might present it as follows:

Corollary 1. *Industrial policy may overcome coordination failure of an international scope, due to information asymmetry.*

The foreigners are ignorant about local conditions, and the locals about technology and market. The principal intended beneficiaries remain the citizens of the home country, but the policy may also have foreign beneficiaries who make indispensable contributions.

Corollary 2. *In overcoming coordination failure of an international scope, the optimal industrial policy may even favor multinational firms over local counterparts.*

Case 5 (Government favors multinational firms). Having cited the different probability of success of firms under different ownership (Yue, 1986), it was argued that Singapore made the right choice to host the heartlessly footloose multinational firms because to wait
for local entrepreneurs to learn modern technology would mean that people would “starve” (Lee, 2000).

The moral here is that under the optimal policy, sometimes the individuals of the host country may gain more as “stakeholders” (employees or suppliers) rather than stockholders.

4. Policy Environment Under Globalization

In this study, attention is directed to the new international environment under the GATT/WTO. Many (though not all) tools for industrial policy now lose favor since they might trigger complaints from injured foreign interests by the restrictions such policy measures impose on trade and foreign investment.

To show how this happens, consider the following cases.

Case 6 (Temporary monopoly by sequenced entry). A case in point is the synthetic fiber industry of Japan (Suzuki, 1999), where behind a protectionist barrier, the large domestic market was awarded first to a pioneer firm as a temporary monopolist, who must shoulder the set-up cost for the new industry. To reduce the resultant deadweight loss, subsequent entrants were sanctioned sequentially, at proper intervals. Once Japan has to fulfill its duties for trade liberalization, however, such an operation is clearly out of the question.

Case 7 (Industry “bundling”). As Stern et al. (1995) reported, Korea used to pair off industries, one easy to launch while the other was much harder, and assign a local conglomerate to pioneer both, under government sponsorship. The logic is, with a far smaller domestic market than that of Japan, Korea can induce a local firm to pioneer in one industry only if the latter is offered the opportunity to dominate two industries. Today, the implied exclusion of foreign imports from both industries is likely to trigger foreign complaints.

The next two cases suggest what can be done for economies with smaller domestic markets.

Case 8 (Manipulation of factor prices). After separation from Malaysia, the boom in the labor-intensive industries of Singapore absorbed the local unemployed labor and attracted many migrant workers. In order to focus on its capital-intensive industry and accomplish a shift in its industrial structure, Singapore raised the cost of labor by sharply increasing employers’ share of pension contributions. This means a hefty upshift of the wage-interest ratio. The intended result is to gain long-term advantages (through learning-by-doing, for example), at the cost of some short-term retrenchment of income, as was the case.

The working of this policy is depicted with a Uzawa diagram in Figure 1, under the assumption of a given two-input, two-output constant returns technology, where the world prices for outputs and the production technology are decided through the world market. The diagram depicts the ex post equilibrium positions both before and after the wage correction, with the prime sign depicting the after-correction situation. The fundamental condition underlining the Uzawa diagram is the “competitive profit condition” in trade theory, where any industry that operates must have the maximum value per worker equal to the cost per worker, and any industry with a maximum value per worker less than the cost per worker would cease to operate.
\[ \text{Capital/labor ratio: } k \]
\[ \text{Wage rate: } w \]
\[ \text{Wage/rent ratio: } \omega \]

\[ w' + rk \]
\[ w' + r' k \]

\[ f_2(k_2) \text{ Sector 2} \]
\[ p f_1(k_1) \text{ Sector 1} \]

**Figure 1. Uzawa Diagram: Wage Correction Expelled the Light Industry (Sector 1)**

**Case 9 (Delayed appreciation/second stage import substitution).\(^5\)** Compared to the better-known Korean “Heavy-Chemical Industry Drive”, Chen and Ku (1999) show that Taiwan’s counterpart is more lasting and no less sweeping. In Taiwan, state-owned firms pioneered in steel, petro-chemicals and electronics industries to supply domestic markets with (upstream) products more or less at import prices. They provide information for the more efficient, late-coming private firms through competitive entry or privatization.

From Case 3, this “pioneer-first, privatize-later” strategy avoids trade frictions. However, Taiwan’s challenge was to launch industries with scale economy without a large domestic demand for the final goods. Even for pilot plants for the upstream operations, meaningful information only comes from operations with some minimum scale. The solution is in sequencing: to launch upstream industries after the export of down-stream industries has expanded far beyond the local demand. In history, “super exporters” do not come by default. For Japan and Taiwan, export booms came hand-in-hand with huge payment surpluses and rapid rising foreign exchange reserves. This boosted values for foreign currency and unit revenue for exported goods.

In short, the rapid export expansion of downstream products under a low exchange rate is but the first stage of a trilogy: downstream expansion, followed by upstream pioneering and then upstream privatization. With the second and third stages already studied in Case 3, we will focus here on the first stage.

It is well-known that up to the mid-1980s, Taiwan resisted pressure for currency appreciation by buying up foreign exchange reserves (Chu and Tung, 1990). The effect on the output of exportables is seen by comparative statics in panels (a) and (b), Figure 2. Let us choose for convenience the unit for exportable good as “one dollar’s worth”, so its unit price in foreign

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\(^5\)Material for this case comes from the far more detailed analysis in Tung (2006).
currency is unity: a value not subject to Taiwan’s influence. In panel (a), $DD$ and $SS$, the demand and supply for foreign currency intersect at a stable equilibrium exchange rate $e$, under balanced international payments. The government’s buying up an amount $h$ of foreign exchange shifts $DD$ rightward by that amount to $D'D'$, and raises the equilibrium rate to $e'$. For the decision problem facing the suppliers of the exportable goods, panel (b) shows the upshift of the horizontal demand curve $dd$ to $d'd'$. Given the supply curve $ss$ which cuts these two at $q$ and $q'$ respectively, this means an increase of the total output of the exportables (rather than exports) from $Q$ to $Q'$.

Note that for analytic clarity, each central element in the stylized “trilogy” — downstream expansion, upstream pioneering and upstream privatization — is treated as a one-shot event occurring in sequence. In real life, each of the three happens in a sequence of steps, lasting for years, and overlapping each other.

Can Taiwan’s feat be replicated in today’s era of GATT/WTO? Historically, Taiwan’s pioneering public enterprises supplied downstream firms in domestic market at world prices (Chen and Ku, 1999). Thus, there was never any (foreign) victim. On the other hand, the fact that these firms received various government subsidies would be a violation of WTO rules today. Does this mean these projects meeting the Bastable Criterion are infeasible today? It seems it all depends on the method of finance. No problem should arise if the initial losses can be met with the infusion of (state) equity funds.

Both Cases 8 and 9 are complex operations, with both benefits and costs. There is no scope here to conduct a conventional cost and benefit analysis. Nevertheless, some broad considerations testify to the wisdom of Singapore and Taiwan.

- Singapore used to have an export garment industry, taking subcontract orders from Hong Kong before the “wage correction”. After the policy reform of China, Hong Kong’s labor-intensive industries relocated to China, causing serious de-industrialization, with its manufacturing labor force dropping from 440,000 in 1994 to 165,000 in 2005. The fact that Singapore, with its manufacturing labor force rising from 447,000 in 1995 to 476,000...
in 2005, has been spared from a similar challenge is some evidence of the success of its structural upgrading policies.

- Taiwan saw its manufacturing labor force changing from 2,444,000 in 1994 to 2,430,000 in 2005, which is basically a standstill. The difference from Hong Kong again can be attributed, at least in part, to the presence or absence of industrial policy (Thorbecke, Tung and Wan, 2002).

5. A Typology for Policy Instruments

How has the era of GATT/WTO influenced the tools for industrial policy advocated in the past? Although trade-related intellectual properties (TRIPs) and anti-dumping (AD) are much discussed these days, few advocates of industrial policy (Hamilton might be an exception!) would propose industrial espionage or violating foreign patent rights. Nor would it appear sensible to export below cost in the hope of ruining all competitors, then enjoying the profit of a world monopoly afterwards. What is really at stake is the openness of the home market. In short, foreign complaints against industrial policy come mostly from foreign interests directly injured by restrictive policy measures directly pertaining to international transactions.

The Venn diagram in Figure 3 classifies the nine East Asian case histories in Sections 3 and 4, and suggests what policy instruments remain practical in this new century.

6. Two Concluding Remarks

First, it is important to add that institutionally, the practice of industrial policy may ameliorate coordination failure through indicative planning (Chang, 1994). In fact, industry promotion in Japan and Taiwan often took place accompanied by meetings of officials, entrepreneurs and experts.6

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6Thanks are due to the observation of Been-Lon Chen that such practices suggest how, in the literature of endogenous growth, similar economies may grow along different time paths near the balanced growth path.
Second, if the gist of industrial policy is to overcome coordination failure for advancing national interest, then logically, when more than one state practices industrial policy such as the competitive building up of such industries like shipbuilding, this leads to avoidable waste. The logical answer is obviously not the return to the state of perfect competition which is prone to coordination failure, but to design and practice industrial policy at a supra-national level. So far, that remains an unexplored path.

Acknowledgments
The authors would like to thank Daniel D. Liu, Been-Lon Chen, Wan-Wen Chu and Tain-Jy Chen for helpful discussions. The first author also acknowledges partial support by the Institute of Economics, Academia Sinica, and the second author thanks Ha-Joon Chang for the encouragement.

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