

ARE INDUSTRY INNOVATIONS DISCOVERED IN SUMMITS OR IN VALLEYS?

Reviewed by Wolfgang Kasper

Encouraging Knowledge-Intensive Industries: What Australia Can Draw from the Industrial Upgrading Experiences of Taiwan and Singapore

by J.A. Mathews
*Australian Business Foundation Ltd
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This slim volume on innovation in selected Taiwanese and Singaporean industries was conceived as a plea for more of the visible hand in Australian industry policy. John A. Mathews, Associate Professor at Macquarie Graduate Business School, was commissioned by the Australian Business Foundation to provide input into the Australian government's 'Innovation Summit' last February. The Australian Business Foundation calls itself 'Australia's newest, independent, private sector economic and industry policy think-tank' (p.3). It is a branch of Australian Business Ltd., the former NSW Chamber of Manufacturers.

The author was given two tasks: (a) to describe and analyse the industrial upgrading experiences of business and government organisations in Singapore and Taiwan; and (b) to examine the cultural relevance of these experiences for business and public policy in Australia.

The descriptive part of the report is richly documented with detailed organisational case material from the late 1990s. Earlier and broader analyses of East Asian industry policy, however, are almost completely missing, except for some passing references to Chalmers Johnson's controversial and—this reviewer would have thought—wholly discredited book on Japan's MITI, and work by Harvard's Michael Porter and the University of Western Sydney's Jane Marceau.

Mathews pays great attention to what he calls 'institutional vehicles'. By this he means organisational arrangements in the sense of more or less durable alliances between selected industrial firms and public agencies, not 'institutions' as widely used in the contemporary institutional economics literature (where the term refers

to rules whose violations carry sanctions). The semantic point is important because more attention to the rules of the political and lobbying game would have yielded insights into the real role of government agencies in Taiwan and Singapore, and why other players, for example unions and independent analysts, have so little clout.

Mathews maintains that much technical and organisational knowledge was learnt through government-led consortia and wise, selective interventions. He summarises his findings in five key points (pp. 88-92):

- New industries were created as deliberate acts of public policy (with incoming direct foreign investors and market forces in his view obviously playing a subsidiary role).
- Technology acquisition and diffusion were managed collectively in 'pre-competitive' cartels that were organised and subsidised by government.
- Much attention was paid to upgrading the technical capabilities of firms, rather than mere cost cutting by process innovations.
- The industries that he selected for study (predominantly electronics) were fostered by selective subsidies and helpful generic industry promotion (supply-side measures), rather than old-fashioned protectionism (an intervention to boost an industry's demand).

Wolfgang Kasper is Professor Emeritus, UNSW; Senior Fellow, The Centre for Independent Studies; and former OECD Adviser on positive adjustment policies for industry. The author would like to thank Professors Helen Hughes, Eric Jones and David Robertson for their useful comments on an earlier draft of this article.

• The collective actors realised that the exploitation of high technology is an open-ended process. Mathews places considerable store in the concept of 'governed interdependencies' (clusters, networks, industry consortia with political and bureaucratic participation, etc.), and he is impressed by government in Taiwan and Singapore as a 'collective entrepreneur' (p. 90).

I found his descriptive account by and large informative, but was irritated by frequent implicit and unexplained preferences for nationalist-mercantilist points of view. He also used 'collectivist terminology', treating countries as if they were individual actors who are able to feel, judge and decide (examples: 'Taiwan has left little to chance...', 'Singapore... reconceptualised its industrial economy'). Mathews therefore treats entire national economies as if they were organisations and disguises the real actors in public policy.

On reading the report, one question came frequently to this reviewer's mind: 'But how do bureaucrats and industry representatives *know* what industrial product or process to pick for selective promotion?' One only has to read the lead article by Helen Hughes in the official history of Singapore's Economic Development Board to appreciate that free trade and signals from the world market were the keys to guiding innovation and industrial change (Low et al. 1983). In my own experience, 'leading the market' is more smoke and mirrors than reality in East Asia. East Asian government bodies have typically followed market signals and have been led by intending foreign investors to a much greater extent than the other way round! In any event, savvy investors are nowadays rarely swayed by a subsidy or tax concession; experience has taught them the long-term cost of such handouts! Locational choices are normally made on the basis of hard-nosed evaluations of expected long-term commercial profitability. Beyond that, the attitude of industrialists is: 'Why not pocket the handout and pretend how helpful it was?'

To draw conclusions for Australian public policy, one has to go beyond a mere description and analysis of organisational arrangements in other countries. The report gives no hint as to what industries the author expects to have a competitive advantage in Australia, although it is implied that Australian industry and taxpayers should

compete in the same high-tech industries which Taiwan and Singapore industry and governments have been targeting. Yet, our resource endowments and competitive advantages differ greatly from those two Asian countries.

Admittedly, knowledge that is more useful is a good thing, but we cannot easily find out what knowledge is useful to Australian enterprises. The critical question for industrial innovation is how it can best be discovered and utilised—through 'Innovation Summits' and committees or through the decentralised search by globally competing entrepreneurs? I recommend that anyone interested in industrial innovation read Schumpeter's or Hayek's celebrated contributions on the use of knowledge (Hayek 1945; Schumpeter, German original 1908, reprinted in English 1961), or—if the language in those classics is too inaccessible—Burton's instructive paper on industry policy (Burton 1983).

In the report under review, these fundamental questions are pre-empted. Whatever the embellishments and latest organisational fashions, the Mathews paper is a plea for government support for selective innovations in industry. Although Mathews initially assures us that his piece is not about the mere picking of winners, he later reports approvingly that Taiwan's 'major innovative program of the

1990s was the identification. . . of Taiwan's Top Ten Emerging Industries which were singled out for special promotion. . .' (p. 27). He also recounts how the Singapore government concentrated scarce administrative and budget resources to subsidise promising technologies and industries.

The general economics literature on selective innovation policies is, in my view, conclusive. Consortia, committees and the like cannot know what specific technologies will be in demand and profitable, nor are most of their members motivated by personal economic gain to search for and test the complex technical, organisational and commercial knowledge that goes into innovations. The decentralised search by entrepreneurs and investors who risk their own wealth, as well as the testing of such knowledge in competition, are the best ways to discover the worth of innovations.

Indeed, the central coordination of selective innovation policies bears great dangers, both for genuine entrepreneurship and good governance:

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- It diverts scarce entrepreneurship from genuine innovation into lobbying.
- It easily corrupts politicians, bureaucrats and industrialists (Just recall how many leading politicians have been confronted with corruption scandals and shattered careers, since the Internet age heralded the new era of transparency!).
- It undermines the rule of law and genuine democracy by discriminating in favour of the well-connected, who can afford lobbyists and management consultants, and against ordinary citizens and battling young entrepreneurs.
- The policy approach favoured by Mathews simply leads to the speedier imitation of other emerging winners elsewhere. While one country can make gains by concentrated, collaborative targeting of innovations, the proliferation of the MITI approach has typically led to over-capacities and trade conflicts.

These facts were predicted and analysed by a high-level OECD report as far back as the early 1980s (OECD 1983). They should give the promoters of selective industry and innovation policies much food for thought.

The only exception to the rule that selective innovation policy does more harm than good is the case of less developed countries, whose leaders can copy and refine what has worked in countries higher up the development ladder. Thus, Japan's MITI bureaucrats were able to identify key industries for coordinated innovation in the 1950s, but had to confine themselves to mere, empty 'Visions' once one Japanese industry after another reached the technology frontier. Korea imitated Japan, and was successful for a while, but it now suffers from the legacy of the *chaebol* conglomerates that failed to acquire an ongoing innovative capacity precisely because of their dependence on the visible hand of the 'collective entrepreneur'. Korea and Japan, whose real per-capita income growth in the 1990s was close to stagnant, are not mentioned much by industry policy promoters any more.

Singapore and Taiwan were somewhat different, and now serve as the new sources of inspiration for the seekers of selective government support. Both countries pursued more liberal foreign trade and investment regimes, and it is no coincidence that Mathews' positive case material comes predominantly from industries that currently enjoy enormous opportunities for technical innovation. Yet, Taiwan and Singapore have much in common with the

now ailing tigers and Japan. The approach to the governance of industry across East Asia was informed by a Confucian 'teacher-pupil relationship'. In other words, new and not-as-yet entrenched industries were kept at arm's length by strong governments that pursued economic growth as a high priority, not least for defence reasons. Superpower rivalry also ensured that the US Congress and the US government often tolerated breaches of the international trade and competition rules by the emerging tigers, and kept US markets wide open for them. Similar favours cannot be taken for granted by established and affluent competitors in Australia.

Both Taiwan and Singapore are ruled by entrenched, immensely rich party elites who do not face the same periodic challenge at the ballot box typical of older, Western democracies. They have no democratic-parliamentary tradition of viable alternative political rivals for electoral and financial support from industry and other backers. Furthermore, in neither country are trade unions free to pursue the wage claims and other aspirations of their members in the ways customary in Western countries. All this makes selective industry policies and the subsidy of lead innovators so much more feasible.

The second point of the assignment was to demonstrate the transferability of the Asian experiences to the Australian political culture. Here, Mathews fails completely and indeed confines himself to perfunctory assertions that Taiwan-Singapore style strategies of innovation targeting would be beneficial 'for Australia'. One has to ask: 'Whom precisely in Australia would such policies benefit?'

There are brief references to clusters and networks in the Silicon

and Po Valleys, which are driven by purely private initiatives and spontaneous self-organisation of producers. We are told that the two East Asian cases are not quite advanced enough for such reliance on markets (p. 97). Is this also true of Australia's mature economy? Does Australia suffer from systemic political and legal risks, so that innovators have to be compensated by tax-funded subsidies? Will it be necessary to curb Australia's traditional electoral democracy and the established administrative constraints on bureaucratic power in order to implement the policies that Mathews and the Australian Business Foundation seem to have in mind? Will voters in Australia's more transparent and mature polity willingly pay taxes to featherbed selected prospective innovators when a whole generation of young Koreans have been rioting in the streets against such

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industrial preferment? Should Australian administrations abandon standards of accountability and scrutiny to facilitate Singapore-style speed in subsidising expected winners? How will politicians fare electorally after having staked public funds on industrial failures? And what will the 'envy industry' say when scarce public funds are thrown at profitable winners? Do Australians have the cultural preferences for authoritarian governance that earlier generations of East Asians tolerated because they were coming from extreme poverty? I note that the young generation of Asians increasingly rejects benevolent authoritarianism and crony policies, pushing for greater democratic constraints on the political-bureaucratic apparatus.

From personal experience, I know only too well that it is easy to swallow everything one is told by official Asian self-promoters when one is hosted by them on fact-finding missions. When faced with typical East Asian boosterism, one can only keep the necessary critical distance if one relies on a set of clear fundamental values—such as freedom, prosperity, justice and equity—and a cohesive social, economic and political theory. Such independent yardsticks are sorely missing from this report.

Mathews would have been somewhat more convincing if he had dwelt a bit more on the long, troubled history of Taiwan's steel, motor and aerospace industries. He seems unaware of Singapore's failed attempt to build up a silk industry in the 1960s and a camera monopoly (Voigtländer) in the 1970s. He might have explained why he believes that Taiwan's subsidy of 40-55% of the market price makes a new motor cycle 'successful' (p. 26), or what the success is if Taiwan's Ministry of Economic Affairs buys itself a new national engine industry by funding 80% of the budget of the industry cartel now building that engine (pp. 48-49).

One wonders what is taught in a business school where 'success' is defined by technical feasibility (does it work?), rather than commercial feasibility (does it make a profit?). One would also have liked an expression of some doubts, for example an explanation about why young Singaporeans with creative entrepreneurial aspirations are migrating elsewhere, and why the Singapore model, when transplanted to the PRC, has so far not been blessed with Singapore-style success.

The recommendation that Australia should simply imitate Taiwan's and Singapore's innovation policies comes in an almost off-hand, pre-emptive way. It flies in the face of a long record of official and private analyses that have debunked the merits of Asia-style industry policies for Australian development policy. Innovation and

future competitiveness in Australia depend on a rich base in human capital and much wider choices than those exercised by a few 'picking winners' committees (Jones 1999).

When the report culminates in an explicit policy recommendation (p. 98), it therefore sounds extremely naive:

'A one-paragraph policy on 'industry promotion' is all that is needed by any state and federal government in Australia today. It would state: We undertake that within one month of assuming office, we will create a new institution modelled on Singapore's Economic Development Board, to promote investment in innovative Australian business sectors. It will create, as one of its first priorities, a science-based industry park modelled on Hsinchu in Taiwan. . . .

If only economic development and innovation were that easy! Just ask the veterans of South Australia's costly Multifunction Polis, or government agencies here that have dabbled in selective innovation subsidies.

Our fundamental points against selective industry and innovation policies have, of course, been made time and again, including in *Policy* and its predecessor publication (Hughes 1997-98; Kasper 1985). Why do such analyses fail to nip new demands for the active governance of innovation and markets in the bud?

The answer is straightforward to those educated in public-choice economics: the suppliers of selective interventions (politicians, bureaucrats, academic advisers, management consultants) gain influence, career opportunities, income and, in the case of political parties, financial support at the next election. Those on the demand side of the interventions game (industrial firms, industry associations) are able to shirk the full risks and costs of testing innovations to find out what the customers want sufficiently to make them profitable.

It is time to stop searching the world for models and policy twists that might justify the next round of innovation subsidies and industry interventions by ignorant but obliging R&D bureaucrats. This reviewer would argue that there is more inspiration for innovators to be found in the valleys than on national summits. Maybe we should begin by asking why a Silicon Valley culture of innovation does not work under Australian conditions. Or maybe it does? I would start to search for insights into Australian innovational capability in three valleys—the Barossa, the Hunter and the Margaret River—from where a generation of supremely innovative, resourceful and now much-admired Australian innovators have shaken the world

of wine-making (*The Economist*, 18-30 December 1999, pp. 95-109).

If there is to be another 'Innovation Summit', the assembled spokespersons and lobbyists, their academic advisers and the media might ask themselves this: how would the Australian wine industry have fared had official coordinators promoted 'governed interdependencies', or had some government agency been so presumptuous as to act as the central oenological innovator? I bet they would have thrown taxpayers' money at the successes of yesteryear, whilst we would eventually have ended up with a wine lake big enough to soak the entire wool stockpile!

Policy

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