Dirigisme Taiwan-Style[1]

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There is a popular image of Taiwan as a close approximation to a free market economy. Indeed it is often held up as living proof that the basic prescription of neoclassical economics is sound not only for advanced industrial countries but also for countries *en route* to that status. Private initiative is always preferred to public, the state is kept firmly in its place. The chief characteristic, and the chief glory of this arrangement is the absence of any directional thrust imposed by the authority of government. Rather, market forces produce the important economic decisions, while the government merely registers them. Industrialisation proceeds by virtue of the sum of the autonomous decisions made by each producer.

More precisely, the argument for Taiwan is that the government *did* meddle in the economy during the 1950s — imposing all the familiar battery of controls and regulations which accompany a strategy of 'import substitution'. Since the late 1950s it has been progressively withdrawing, progressively widening the room for untrammeled market forces. And progressive liberalisation has gone hand in hand with rapid economic progress. It is above all the throwing open of the economy to international markets in the early 1960s which set in motion the relentless drive for efficiency in resource allocation which in turn produced rapid growth. Other countries are advised to learn the same lesson.

Such is the economic legend. It is by no means wholly false. And it is certainly the case that the overwhelming majority of Taiwan's academic and government economists since the 1960s have believed in the virtues of the freely functioning market as an article of faith as well as of rhetoric. Yet it is not fully consistent with the way the government has in practice behaved.

The government has adopted over a long period of time a much more aggressive set of industrial policies than free trading principles would justify. It has been *anticipating*, rather than simply reacting to, changes in Taiwan's international competitive position. And it has been *selecting* between industries and specific products in giving substantial incentives.

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Take the anticipation point first. The usual interpretation says that the push into heavy and chemical industries dates from the early 1970s, *after* and in response to rising real wages, competition from other NICs, and rising protectionist barriers in export markets. In the words of Samuel Ho, a leading expert on Taiwan's development:

> With protectionist sentiments rising in the developed countries, continued rapid expansion of the light manufactured exports on which Korea's and Taiwan's industrial growth had been based appeared problematic. Rising wages in Korea and Taiwan also suggested that their comparative advantage was shifting away from the semi-skilled, labour-intensive industries that grew so rapidly in the 1960s. To policy-makers in both countries, these changes in external and internal conditions suggested a need to restructure the industrial sector.

Accordingly:

> In both Korea and Taiwan, the economic plans that emerged in the mid-1970s (Taiwan's Seventh Plan for 1976-81 . . .) reflected these concerns. Planners advocated a move away from the labour-intensive industries . . . This new direction of industrialisation [towards heavy and chemical, as well as technology-intensive industries] was mapped out in the mid-1970s, shortly after the first oil crisis . . . [Ho 1981; 1,179-81].

[1] This article is a condensed version of part of the argument of a forthcoming book, *Guiding the Market: Taiwanese industrial policy*. As well as saying much more about the policies that have been followed, the book discusses the institutions involved in guiding the market, and the encompassing political institutions and attitudes. It also considers how the interpretation of the role of government given here fits with the three prevailing interpretations of how Taiwan 'did it' [see also Wade 1982].

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This is the 'reactive' view of how it happened. In fact, however, the move into heavy and chemical industries was planned long before the early 1970s. The 1965-68 Plan is emphatic that:

> For further development, stress must be laid on basic heavy industries (such as chemical wood pulp, petrochemical intermediates, and large-scale integrated steel production) instead of end product manufacturing or processing. Industrial development in the long run must be centred on export products that have high income elasticity and low transportation costs. And around these products there should be development of both forward and backward industries, so that both specialisation and complementarity may be achieved in the interest of Taiwan's economy.

If this is done:

> We shall then be able to meet the changing situation in the world market brought about by the rapid industrial progress of the emerging nations and the growing sophistication of the industries of the developed countries [Government of Republic of China 1965:122, 124].

These arguments were formulated in 1962-64, several years before the end of labour surplus (conventionally put at 1968-70), still longer before protectionist barriers began to rise, and more than 11 years before the Plan to which Ho attributes the first expression of restructuring concerns.

The *first half of the 1960s* saw the rapid establishment of a petrochemical industry on the island; by 1980 Taiwan was the fourth biggest producer of synthetic fibres in the world. The government took the leading role in promoting the steel and shipbuilding industries, from the early 1960s onwards. The first nuclear reactor was started in *1968*, and came on stream in 1976 in time to help the country recover from the first oil shock and weather the second. The government established a number of industrial research and service organisations to promote technological and managerial upgrading in specific sectors; such as the Metal Industries Development Centre, established in *1963* to demonstrate improved production and quality control methods and to provide management training courses; and the China Data Processing Centre, established to push the introduction of computers in Taiwanese industries, in *1965*. Other government sponsored and guided research and service organisations were established for chemicals, mining, energy, glass, textiles and food processing. All this activity was part of the foundation for what the engineers of the Industrial Development Bureau unabashedly call 'the second era of import substitution industrial development' [1982:1], which they already anticipated during the 1960s even as the export of labour-intensive manufactures boomed all around them.

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What methods have been used to pursue the strategy of secondary import substitution and new export promotion? In particular, how much selection have government officials made between industries and specific products; and how much discretion have they exercised on a case-by-case basis? It needs to be recalled that of all the prescriptions of neoclassical economics, that which says that government officials should not attempt to exercise selective and discretionary judgement on such matters is one of the sternest.

Take first the *trade regime*. For all the characterisation of Taiwan as a free trade economy, the government has not allowed the use of foreign exchange, the composition of imports, to be decided by domestic demand in relation to prices set outside Taiwan. It has influenced the volume and composition of imports by a combination of very selective controls on trade, both (non-discretionary) tariffs and (discretionary) quantitative controls. It must be stressed that the reason for the elaborate apparatus of trade management is *not* to save scarce foreign exchange. Taiwan is in the unusual position of having run balance of payments surpluses in most years since 1970, and the foreign exchange gap has not been a serious preoccupation of the planners since the late 1960s (in sharp contrast to South Korea). The main objective has been to build up technological and supply capability *within Taiwan*, secondly to use trade as a substitute for diplomatic relations now that the country has been diplomatically isolated by Mainland China, and thirdly to raise government revenue (nearly a quarter of total taxes came from tariffs in the late 1970s).

Government officials are required to exercise a high degree of selectivity in setting tariff rates. The tariff regime is extremely differentiated by product, with tariffs ranging from zero to well over 100 per cent. It is quite inconsistent with the two-tier structure recently recommended by some neoclassical theorists for developing countries; a 10-15 per cent *uniform* rate of effective protection for all manufacturing activities other than the infant industries, which should get a *uniform* rate no more than double the normal rate [eg Balassa 1975]. Published tariffs are not an accurate guide to the rates a potential importer must pay; for the basis of import valuation for tariff purposes is the cif price plus 10 per cent (down from 15 per cent prior to 1983, and 20 per cent before 1979) plus one or two other charges. The average ad valorem tariff on dutiable imports in 1977 was about 20 per cent.

Quantitative import controls provide a more subtle and flexible instrument than tariffs. For the most understandable of reasons the government is anxious not to be seen to be doing anything which might provide a pretext for other countries (notably the United States) to put up barriers to its exports; and takes great care to keep the mechanisms of quantitative import control out of sight. The public classification of imports into 'prohibited', 'controlled' and 'permissible' does not capture the scope of the system, for many items on the 'permissible' list are in fact not freely importable [Westphal 1978]. To cut a long story short, a would-be importer of steel and other basic metals, petrochemicals, chemicals, some specialised glass, some machinery and components (eg some machine tools, forklift trucks, bearings), amongst other items, is likely to find his application for a licence (required for *all* imports and exports) refused unless he can establish that the domestic supplier cannot meet his terms, even though these items may appear in the 'permissible' list. On top of restrictions by product, there are restrictions on who can import (traders can only get import licences if they meet certain minimum asset and export requirements, some items can only be imported by end users and/or by government agencies — so that they rather than traders get the windfalls); and restrictions on where the imports can come from. The latter are often aimed against Japan. More subtle restrictions on sources may also be used to keep out products competitive with US imports, because of American pressure on Taiwan to reduce the trade surplus with the US. And if wider foreign policy objectives require, almost any restriction can be set aside; on imports of meat from Latin America, for example, which though strictly prohibited for health reasons, nevertheless are sometimes (secretly) allowed in to help secure Taiwan's growing interests in that region.

What is the import position of exporters? In the neoclassical interpretation the most important reason for Taiwan's boom in manufactured exports (after the availability of cheap labour) is that exporters faced a virtual free trade regime: they could buy inputs for exports at world market prices, and hence have not had a net incentive to sell on the domestic market rather than on the international market (unlike in the textbook import-substituting trade regime). In what follows I ignore the export processing zones, which have not been very important in Taiwan's total exports.

The evening rush hour of Taiwanese steelworkers: China Steel Complex, Kaohsiung.

It is true that exporters pay no tariff duty on intermediates used for export production. However some very important intermediates are *not* freely importable, because they are subject to the mechanism of import control just described. In principle, items can only be put on the list subject to this control if the price of the domestic substitute is equal to the cif price of imports when the imports are to be used for export production, or the cif price plus all tariffs and other charges when the imports are to be used for domestic market production. In practice there is scope for negotiation in favour of the domestic producer.

As for capital goods, exporters *do* have to pay duty unless they are concerned with products which appear on a list of specific items to be encouraged (eg high voltage insulation tape with working tolerance of 6.6 kv or more), and unless a domestic substitute for the capital good is not available (again there is room for negotiation on what constitutes a substitute). And a variety of capital goods are subject to quantitative import controls, even if they are to be used for export production. Exporters are, however, exempt from indirect taxes on input purchases. They have also in the past been given an incentive through the specification of side-conditions on the lists of items to be given fiscal incentives (see below), which said that the incentive would only be given if a certain minimum share of the output was exported.

The fact that exporters have to pay duty on many capital goods (typically of 20+ per cent in the late 1970s) and cannot freely import some very important intermediates as well as some capital goods, must qualify the proposition that exports have faced a free trade regime. The government has certainly allowed the pressures of the international market to bear down on the domestic economy, by using international prices to discipline the price-setting of domestic producers protected by quantitative restrictions on imports — an important difference with the textbook case of import substitution. But whereas small differences between domestic and import prices for the same item are conventionally taken to mean little effective protection for domestic producers, in fact domestic buyers of capital and intermediate goods do *not* face neutral incentives as between buying abroad or domestically. By means of quantitative restrictions, even exporters may not have a free choice or neutral incentives. This, in a word, is how the Taiwanese Government has attempted both to expose the economy to the discipline of the international market and to build up domestic capability in selected capital and intermediate goods industries.

If neoclassical theory is to advance beyond the crude dichotomy of import substitution versus export promotion, the Taiwanese experience of trade management would repay open-minded study [see Scott 1979; Little 1979]. There is much more to say about that experience. But let us pass to the second main instrument of industrial policy.

What is unusual about Taiwan's *fiscal incentives* is not their content. They comprise the familiar tax holiday (five years), accelerated depreciation, investment tax credits, a reduced rate of business income tax for production of certain items. What is unusual is the degree of selection between products which is entailed in the specification of eligible items: in heavy electrical machinery, for example, six types of product are identified as eligible for a reduction in business income tax from 25 to 22 per cent; one of which is transformers — but not all transformers, only those of 154 kv class or above; in electronics, not any semi-conductor devices, but only those equipped with diffusion facilities or ion implantation facilities. Over the 1970s, as technology frontiers within Taiwan have been pushed outwards, the definition of products eligible for incentives has been made more stringent (by higher performance standards, for example), so as to keep the incentives pushing on the frontiers. Reading the lists of items eligible for various fiscal incentives, one has the distinct impression that the Taiwanese planners know exactly where they want the economy to go to. The compilation of the lists involves them in a considerable exercise of judgement about which products should be promoted.

As for *credit controls*, since the 1950s these have been less important in Taiwan than in many other countries, including Korea and France. The banking system is almost wholly government owned, and the government sets interest rates. Some preferential financing for exports has been available, but much less, and at a lower margin of preference, than in Korea over the 1970s. To help steer resources to priority sectors the government has established a variety of special funds for specific purposes; but has not set credit allocation targets for commercial bank lending. On the whole the government has used credit to a lesser extent than one might suppose from government ownership of the banks, or from the elaborateness of the trade and fiscal incentives.

Direct foreign investment has been actively solicited, not only to provide new markets and to bring new technology to the island but also to have a trip-wire of important US companies in case China decides to invade. But again, while Taiwan has been less selective about foreign investment than Korea, it has still been quite selective; and increasingly so as labour has become scarcer and as Taiwanese firms have acquired technological capacity in many sectors. Government officials exercise a considerable amount of discretion as to what incentives (beyond the standard package) a

foreign firm is offered and what obligations are imposed on it (how much of its production has to be exported, how much of its inputs have to be locally made, etc). And the government has been active in reducing the enclave nature of foreign firms by performing a matchmaking function — scrutinising the flow of imports going to foreign firms, seeing which could feasibly be produced in Taiwan, encouraging local suppliers (always with the lever of import controls in the background), and doing the same with exports to see what could be further processed in Taiwan.

For complex reasons which I shall not go into, the state of Taiwan has exerted less direct discretionary influence over private domestic firms than in Japan, South Korea or Singapore; but has offset this weakness with a larger *public enterprise sector*. The whole of the public sector (government and public enterprises) is substantially bigger than in such putatively more 'socialist' countries as India and Tanzania, to say nothing of Japan and the United States. Public sector final demand (government consumption, government capital formation, public enterprise gross capital formation) as a share of GDP was 30 per cent in Taiwan over 1975-78, only 20 per cent in India, 25 per cent in Tanzania, 19 per cent in Japan and 21 per cent in the United States [Pathirane and Blades 1982]. As for public enterprises specifically, their share in total fixed capital formation is about the same as in India (33 per cent in 1978-80), significantly more than in South Korea (23 per cent). Individual public enterprises are typically amongst the largest firms in their respective sectors. In 1980, the six biggest industrial public enterprises had sales equal to the 50 biggest private industrial concerns. The public enterprises cover the whole range of sectors, but are concentrated on the commanding heights to which European socialists wistfully aspire: petroleum and petrochemicals, fertiliser, steel and other basic metals, shipbuilding, and heavy machinery (in addition to the standard electricity, gas, water, railway and telephone utilities). If there is less pushing and prodding of private firms in Taiwan than in the other dirigist NICs, it is partly because the state has this large public enterprise sector as an instrument of selective and discretionary intervention. The main large lump import-substituting projects of the 1970s — in petrochemicals, steel and other basic metals, electric power and shipbuilding — were carried out by public enterprises. They have access to various kinds of preferential investment financing, notably direct disbursement from the government budget and access to overseas loans. If one asks, then, from where the major new industries of the 1970s got their finance and on what terms, the answer is that a large part of the new industries were in public enterprise hands and got finance on preferential terms. This qualifies the earlier point about the overall unimportance of selective and discretionary allocation of credit.

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The Taiwanese Government has imparted a directional thrust to the economy by means of trade controls, fiscal incentives, some credit incentives and disincentives, controls over direct foreign investment, and state-owned enterprises in key sectors. These several policies have a high degree of coherence, in the sense that their impact is cumulative: the activities which receive help via trade controls also get fiscal incentives and promotional assistance, for example. The policies require government officials to exercise a good deal of selection of products to encourage; but with the exception of quantitative import controls, are relatively non-discretionary with respect to private domestic firms. They aim to structure the incentive environment of private firms in such a way that the autonomous profit-seeking of private firms will lead them to behave in ways which aggregate up to national goals.

On the other hand, relatively little use has been made since the early 1960s of direct negative controls on production or investment. Whereas many other Governments have tried to bolster leaky trade controls with direct controls on production in order to block off imports to non-priority sectors, the Taiwanese Government has not done so. The relative absence of direct negative controls reflects an important characteristic of the macroeconomic environment: the pricing of the basic factors of production at levels close to scarcity value. The exchange rate has not been much overvalued; inflation has been kept low; interest rates have been kept high (by international standards); public enterprises have not in general been subsidised. With the basic factor prices at close to equilibrium levels, less rationing by administrative means is needed, and more reliance can be placed on structuring incentives. In Korea, by contrast, factor prices have been less close to scarcity values, and the government has used more positive and negative discretionary controls [Jones and *SaKong 1980*].

The overall price environment of course is just what the neoclassical interpretation concentrates on, to the exclusion of almost everything else. That interpretation is not so much wrong as misleadingly partial. By implying that 'getting the prices right' (putting domestic prices into line with international prices) was the almost sufficient condition of Taiwan's success, it underplays the conditions which allowed Taiwan to respond with high short-run supply elasticities — which include the long experience under the 'hard', growth-oriented colonial state imposed by the

Japanese (1895-1945), the build-up of industrial capacity during the import-substituting regime of the 1950s, and a certain kind of disciplined political regime. This interpretation occludes the extent to which government officials have continued to exercise foresight on Taiwan's changing international position, and selectivity with respect to specific industrial products. Without these other factors, getting the prices right may have had no more effect than pushing on a piece of string. Moreover, prices themselves have a meaning in a guided market economy like Taiwan's different from that in neoclassical theory. For the government's modifications of the competitive process changes the prices to which enterprises respond. And not all of an enterprise's decisions are allowed to be determined by prices; a small number of very important decisions may be decided, in the case of selected types of firms or industries, by the government (eg how much of its output a foreign firm must export, what sectors a firm cannot expand into). Taiwan's experience suggests that while government officials anywhere can be obstructive of economic progress, once they are geared to promoting technological change they can facilitate industrialisation by exercising foresight in a way that the ordinary businessman simply could not afford to cultivate.

But how much impact have the policies really had? It is always open to the doubters to say, echoing Jacques Rueff on French planning, that the policies contributed no more to Taiwan's industrialisation than the cock's crow contributes to the dawn. Taiwan's hundreds of professional economists have shown conspicuously little interest in the question of impact, preferring simply to believe that virtually all interventions are contrary to nature and to be deplored. Not unrelatedly, economists have had little influence in Taiwanese industrial policy (beyond the realm of monetary policy). The policies have been designed by engineers, and engineers have been responsible for formulating the lists of activities to be encouraged.

The question of effectiveness is certainly very complex. The above account does, however, put the onus on the sceptics to *show* that the policies, for all their interventionist intention, had only a negligible role in one of the most successful industrialisations on record. Until that is done, Taiwan cannot readily be used to support the case that free trading principles, and a government restricted to law and order, infrastructure and macro balance, are always best. Often best, maybe; but not always best, and the crucial question is what makes the difference.

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