
Did China follow the East Asian development model?

Andrea Boltho¹
Maria Weber^{2,3}

Abstract

China is located in East Asia and, just as Japan, Taiwan or (South) Korea at earlier stages of their development, has now grown very rapidly for some three decades. That is not enough, however, for it to qualify for membership of the club. The East Asian development model has a number of additional and important characteristics. Four are selected for discussion: the almost constant encouragement given to investment, the manufacturing sector and external competitiveness, and pursued via a variety of fairly interventionist industrial, trade and financial policies; a concomitant belief in the virtues of intense domestic (Japan and Taiwan) and foreign (Korea) competition; a set of broadly sensible and appropriate macroeconomic policies; and a number of favourable (pre-)conditions, such as the presence of a homogeneous population, a relatively high stock of human capital, reasonable income equality and fairly authoritarian governments. China, since reforms began in the late 1970s, has shared some of these characteristics, but not all. In particular, it is still much more of a command economy than the other three countries have ever been, yet, at the same time, has embraced globalization with, arguably, much greater enthusiasm than was done, in earlier times, by Japan, Taiwan or Korea. If China's experience, however, is compared with that of other, more or less successful, developing countries, the similarities with the East Asia development model would seem to dwarf such differences.

JEL codes: N10, N15, O53, P52

Keywords: China, Growth, East Asia, Economic Policy

Introduction

The exceptional economic history of countries such as Japan, Taiwan, (South) Korea and the city-states of Hong Kong and Singapore, has often been put forward as exemplifying a unique and extremely successful East Asian model of development. In one very simple sense China is obviously part of this experience if only because it is also located in East Asia and its growth since the late 1970s has been just as rapid as that of its neighbours. This is shown in Chart 1 which plots the level of China's GDP per capita at purchasing power parity (PPP) over the 25 years that go from 1980 (just after the beginning of reforms) to 2005 and compares it with similar data for Japan (over the period 1950-75), Taiwan (1960-85) and Korea (1965-90). The particular time-spans chosen are the quarter centuries (beginning or ending with round figures) that have exhibited the fastest growth rates in each of the four countries respectively. They also happen to more or less overlap with what the literature would consider as having been the periods of successful economic take off in the three countries. Hong Kong and Singapore are not being considered in what follows given that their limited size makes comparisons with China even more hazardous than with, say, Korea or Taiwan.

Geography and rapid growth may be necessary conditions for admittance to the "East Asian club", but they are clearly not sufficient ones. A number of other important economic, institutional and social features have been selected in the literature as crucial

¹ Magdalen College, University of Oxford

² Università Bocconi, Milano

³ Maria Weber sadly passed away in the early stages of the preparation of this paper. Useful, and in no way incriminating, comments on an earlier draft were provided by Klaus Wegner, participants at Conferences at Bocconi and Perugia universities and two anonymous referees.

to the East Asian model of development and, arguably, China may not have shared in all, or even any, of these.

The following will first briefly sketch what these features may have been. The second and third sections will then look at similarities and differences between China's experience and that of the other three East Asian countries here considered, while a brief conclusion will try and pass judgment on whether China did, or did not, conform to that model of development.

1. The East Asian Development Model

There is no agreed definition of what constitutes the East Asian model of development. How economies grew, how industrial structures were transformed, how governments intervened in solving coordination problems, pursuing efficient policies, making credible commitments, etc. varied depending on time and location [Haggard, 2004]. Different writers select different characteristics, often depending on what country (or countries) they are studying, and, at times, in function of their ideological preferences. At the clear risk of over-simplification, but so as to maintain the discussion manageable, four major features will be selected that have, arguably, been both common to, and crucial for, the experiences of Japan, Taiwan and Korea (henceforth JTK) over the periods here examined:⁴

- i. An almost constant emphasis on the importance for rapid growth of investment, the manufacturing sector and external competitiveness, an emphasis that was translated into interventionist industrial, trade, financial and other policies;
- ii. A concomitant belief in the virtues of a competitive economy in which firms, while often protected from foreign companies and in downturns, would be expected to be able to fend for themselves against domestic rivals and on the world market;
- iii. A set of broadly sensible and appropriate macroeconomic policies, normally aiming at budgetary balance, or even surplus, and trying to prevent high and variable rates of inflation;
- iv. A number of favourable pre-conditions of a broader socio-economic and political nature, such as homogenous (and slow growing) populations, high levels of human capital formation, relatively equal patterns of income distribution (thanks partly to prior agricultural reforms), competent bureaucracies and fairly authoritarian governments through much of the periods here considered.

A high level of external competitiveness was almost certainly one of the primary aims of economic policy in all the three countries. Both the demonstration effect of other successful, developed economies and relative natural resource-scarcity, meant that competitiveness had to be achieved in the manufacturing sector. This, in turn, required (usually foreign) technology and high levels of fixed investment so as to achieve economies of scale. Since not all sectors could be encouraged at the same time, governments consciously selected some activities rather than others, on the strength of

⁴ Some of these features come from what was probably the seminal work on Japan's model of development [Johnson, 1982]; others from the very comprehensive World Bank study of the East Asian experience [World Bank, 1993].

earlier experience in industrialized countries and guesses as to the likely values of income elasticities of demand on world markets.

That such industrial policies were important is seen by the many plans that Japan's Ministry of International Trade and Industry (MITI) (particularly in the 1950s and 1960s) and Korea's Economic Planning Board (EPB) (particularly in the 1960s and 1970s) launched to try and foster the development of selected manufacturing sectors, often, though not invariably, in heavy industry. Taiwan's Council for Economic Planning and Development (CEPD) may have eschewed formal plans, but also intervened with what have been called "nudging" policies, designed to persuade companies to move in certain directions [Wade, 2004]. In all the three countries, this "picking winners", or even better "making of winners" [*ibid.*, p.334], used a panoply of measures to encourage investment at home and improve competitiveness abroad.

Fixed investment, which reached record high levels in all the three countries, was directly stimulated by public investment provisions (particularly in Taiwan and Korea) [Rodrik, 1995] which helped to "crowd-in" private sector capital formation. In addition came preferential treatment in public sector purchases, standard tax concessions on reinvested profits or on depreciation allowances, or not so standard interest rate subsidies. Important too, at least in Japan and Korea (though to some extent also in Taiwan [Wade, 2004]), were severe restrictions on foreign direct investment (FDI), designed to protect domestic firms from takeovers. And investment was also, arguably, aided by a financial system that put a lot of emphasis on bank finance and on relatively high debt/equity ratios. A further, indirect, help to investment came from an ample supply of domestic savings. These were already high from the outset in Japan, but policy contributed in further boosting them, through, for instance, budget surpluses (and possibly, also, by limiting the availability of consumer credit). Competitiveness was strongly aided by numerous subtle, or not so subtle, forms of protectionism against foreign producers. These included straightforward policies of import substitution, direct or indirect export subsidies, preferential foreign exchange allocation, and, at times, exchange rate undervaluation. It is true, of course, that with the passing of time, and as the economies developed, many such features of interventionism faded away, but in the high growth quarter centuries here selected, they were clearly present.

A major theme running through the literature is the issue as to whether these various forms of industrial policy played a large, or even overwhelming, role in the successes of JTK or were, alternatively, only very minor (or possibly even counter-productive) contributors to a story dominated by the free interplay of market forces. On the one hand is a school that sees governments as having successfully influenced the course of events [e.g., Amsden, 1989; Vestal, 1993; Rodrik, 1995; Wade, 2004]. At the opposite end of the spectrum are works that belittle the influence of public policy [e.g., Little 1979; Beason and Weinstein, 1996]. A major World Bank investigation into the issue concluded, rather sceptically, that industrial policies may, at most, have had only a small positive impact on outcomes [World Bank, 1993]. While the present writer has his own views [Boltho, 1985], for present purposes there is no real need to take a position on this fascinating debate. Whether government intervention was successful or not in promoting development in East Asia, it cannot be denied that it played a very important role and represents, therefore, a crucial component of the "model".

Interestingly, protection and intervention were accompanied by a firm belief in the virtues of competition both at home and on world markets, a belief that stands in

sharp contrast to the more usual industrial policies carried out in other developing countries. In Japan competition was, for instance, encouraged by the allocation of scarce and highly desirable foreign technology by MITI not to just one, but to several rival claimants among the *keiretsu* groups that dominated the economy [Boltho, 2002]. In Korea it was fostered by the practice of granting subsidies to the large *chaebols* on condition that these fulfilled stringent performance standards (usually in terms of import-substitution or export targets on world markets) [Amsden, 1989]. In Taiwan it was more easily promoted by the existence of a large network of small and medium-sized firms. And partly as a result, product market competition, at least in the manufacturing sector, was usually fierce in all the three economies.

A third important characteristic of the “East Asian model” that has attracted attention, has been a set of fairly conservative macroeconomic policies [World Bank, 1993]. This too stands in contrast to the policy stance often (though not invariably) followed in other developing economies. On the fiscal policy front, all three countries, seem to have run budget surpluses over the period as a whole (Table 1).⁵ The deficits that were occasionally incurred tended to reflect the impact of cyclical downswings rather than the launching of large expenditure programmes and these deficits were never financed by the Central Bank [Fry, 1985]. Nor did this prevent Japan, at least, from setting up in the 1970s and 1980s a generous welfare state. It is more difficult to assess the stance of monetary policy since interest rates were often controlled, as was the growth of credit (any resulting imbalances being reflected in either rationing or in the prices set on “kerb” or secondary markets). Very rough estimates of real interest rates (on lending), that are not strictly comparable across countries, suggest that these were positive in most years (Table 1). And, indirectly, policy appears to have been no more than accommodating to the needs of very rapidly growing economies, since inflation seldom reached exceptional levels. The oil shocks of the mid- and late 1970s did lead to sharp inflationary outbursts, but these were then quickly reined in (with only Korea standing out as a partial exception in the later 1970s).

Finally, stress has also been put on several other features of a wider socio-economic nature. Two, in particular, seem to have been important: a long-standing stress on the importance of education, and patterns of income distribution that were relatively equal by international standards (thanks in part to land-redistributing agricultural reforms at the beginning of the various periods). And, income distribution may even have become more equal during the rapid growth years, contrary to what one might have expected [Ranis, 1985]. High rates of human capital formation must have eased the path of subsequent industrialization; absence of major inequalities may have helped in encouraging investment at the expense of consumption, since “sacrifices” were, more or less, equally shared. Indeed, econometric work suggests that initial equality and initial levels of primary school enrolment can explain a good deal of East Asia’s subsequent successful growth experience [Rodrik, 1994].

Further not purely economic pre-conditions that have received attention in the literature have been the presence of a homogenous population and of a competent bureaucracy [World Bank, 1993], apparently little affected by corruption and often able to withstand political interference (this must have greatly reduced the incidence of rent-seeking, an always present danger in countries in which bureaucratic intervention aims

⁵ The data on budgetary balances can only provide very broad orders of magnitude since they are not strictly comparable, as definitions have varied across both time and space. In addition, the quality of some of the earlier statistics is, at times, uncertain.

to protect or encourage particular activities or sectors). Finally, none of the three countries was a liberal democracy in the Western sense through most of the periods here considered. At best, they were “tightly circumscribed” democracies [Wade, 2004, p.xviii]. Japan was dominated by a single party, Korea and Taiwan were both relatively authoritarian states. Arguably, economic decision-making may have been facilitated by the presence of a strong central government.

2. Similarities

Not surprisingly, perhaps, the buoyant transformation that China has experienced since its economic reforms were launched in late 1978 looks very different to the much more gradual developments seen in the three other countries here examined. However interventionist JTK may have been, none started the period with a near-Stalinist form of central planning and none ended the period with a mixed economy in which many aspects of a command system were still present. And by the same token, neither Japan nor Taiwan nor Korea, even if they gradually liberalized their economies through time, changed their systems as radically as did China. This being said, just as one is struck by such glaring differences, one can be similarly struck by other stark similarities.

These are most apparent at the macroeconomic level. The Introduction already pointed out how GDP growth rates were very similar. The same seems to have been true for total factor productivity growth, at least as far as Japan and China are concerned. A recent investigation [Maddison, 2009], shows for instance that, for the slightly different time spans of 1952-78 and 1978-2003, GDP growth rates for Japan and China were identical (at 7.9 per cent per annum), while total factor productivity growth rates were very similar (3.3 and 3.0 per cent per annum respectively).

Rapid growth, in turn, was made possible, as in JTK, by high savings, high investment, and high external competitiveness. Similarly to Japan, savings were already very substantial at the outset of the period and then rose to levels probably not previously recorded anywhere else in the world. The same is broadly true of gross fixed capital formation (Chart 2). There were, of course, differences in behaviour. More of China’s savings, particularly in recent years, came from the corporate sector than was probably the case elsewhere in East Asia. And the investment effort of JTK was largely private (even if in Taiwan and Korea public investment was also important) [Rodrik, 1995]. To be sure, the authorities were active via subsidized credit and other concessions, but hardly ever seem to have taken detailed investment decisions. By contrast, much of China’s investment took place in the state-owned enterprise (SOE) sector in which the government intervened very heavily by providing vast financial resources. The significantly more dynamic private sector has had much greater difficulties in getting access to funds, even though it has been estimated that its return on capital is more than 50 per cent higher than that of the SOEs [Perkins and Rawski, 2008]. Clearly, China has permitted the existence, but hardly supported the efforts, of its private domestic firms.

Similarities in success also emerge at the external level. Chart 3, for instance, plots the rising share of East Asia’s four countries’ exports in the world market for manufactures. Japan’s rising penetration in the 1950s and 1960s is striking, as are those of Taiwan and Korea (much smaller countries, after all) in the 1970s and 1980s. What China has accomplished since the late 1980s, looks even more impressive. To some extent this outcome may have been helped by exchange rate policy, more so probably

than in JTK. Chart 4 presents some simple estimates of real exchange rates for the four countries.⁶ However imperfect the data may be, the Chinese trend is sufficiently striking to suggest that exchange rate depreciation, at least until the mid-1990s, must have been an important component of China's external success. It is true that the exchange rate was substantially overvalued at the outset of the period [Lardy, 1994], but its subsequent depreciation was of the order of nearly 70 per cent.⁷ Depreciation seems to have been much less in evidence in JTK, at least according to the Chart (though it should not be forgotten that both Taiwan and Korea did devalue their currencies quite significantly in the late 1950s and early 1960s respectively).

A further similarity probably lies in the broadly shared belief in all four countries that competitive market conditions are crucial for rapid economic growth. As already mentioned above, in Japan this competition took mainly place between the rival national conglomerates which were all active in most sectors; in Korea it was forced upon large domestic groups by making government support conditional on export successes on the world market; in Taiwan it was the almost inevitable consequence of a more fragmented industrial structure. China may still be providing soft budget constraints to some of its SOEs, but it has, over the last decade, forced many to either merge or close down. Indeed, in some areas (e.g., oil or telecoms) it seems now to be following Japanese practices, by establishing oligopolistic competition among a few major enterprises [Naughton, 2008]. More broadly, it accepted, indeed welcomed, the intense competition that arose internally among so-called township and village enterprises (TVEs) and other small private firms, as it liberalized the economy in the 1980s, and the further competitive pressures that came from its rapid opening to the world economy in the 1990s and thereafter.⁸

Interestingly, China may have also benefited from a further element of domestic competition not present in the much more centralized JTK, namely interregional competition. Partly because of its size, the country has had a long tradition of decentralization. Even in the command economy period, for instance, the central plan controlled probably less than half of industrial output [Brandt *et al.*, 2008]. Over the last three decades of much more open markets, scope was given to decentralized experimentation in novel institutions and forms of organization [Brandt and Rawski, 2008]. The provision of tax receipts has also led local governments to compete against each other by concentrating spending on productive investment and trying to create hospitable economic environments designed, in particular, to attract FDI [Qian and Weingast, 1996].

Broadly similar too were the macroeconomic stances followed by the four countries. As in JTK, the Chinese government has pursued a prudent fiscal policy (witness the virtual absence of public debt), and achieved a modest budget surplus over the period as a whole. Measuring the stance of monetary policy is, as in JTK, difficult given that interest rates have usually been controlled. Rough estimates of real lending

⁶ Since data unavailability precludes the use of real effective exchange rates based on the development of unit labour costs, Chart 4 uses a much simpler proxy, namely relative wholesale price developments. For Japan, these are limited to the US, for Taiwan, Korea and China to the US and Japan (with weights of 75 per cent and 25 per cent respectively).

⁷ An alternative (and more appropriate) IMF estimate of China's real exchange rate, based on unit labour costs, arrives at a real depreciation between 1984 and 1993 of as much as 85 per cent [Wang, 2004].

⁸ "Reform has pushed China's economy towards extraordinarily high levels of competition. Despite pockets of monopoly and episodic local trade barriers, intense competition now pervades everyday economic life" [Brandt and Rawski, 2008, p.14].

rates, however, indicate that these were also positive (Table 1). Moreover, the absence of virulent inflation, just as in Japan and Taiwan, does indirectly suggest that policy, while accommodating to the needs of a rapidly growing economy, was hardly reckless. And on the two occasions in which inflation did touch double digits, the authorities' reaction was very prompt.

A proper macroeconomic policy framework needs an efficient bureaucracy that is not prey to political interests or tainted by corruption. JTK all benefited, at the outset of the period, from the absence of a politically powerful dominant class [Aoki *et al.*, 1996]. Landlords had been eliminated by agricultural reform; industrial interests had either been annihilated by the war and subsequent reforms in Japan, or had never really been allowed to develop in Taiwan or Korea by Japanese colonialism; labour interests had been emasculated by the Cold War [*ibid.*]. The bureaucracy (and political leaders) could thus fill the vacuum. And while corruption was hardly unknown in the three countries, it may well have mainly taken the form of what has been called "high level" corruption. This is, arguably, less costly and inefficient than graft at all levels of government [Rodrik, 1994]. China does not fit this picture in every single aspect. The party represented an all-powerful dominant class, but it did allow economic reforms in exchange for maintenance of its political predominance. And while corruption has been rampant (more so, almost certainly than in JTK),⁹ this did not prevent the adoption of broadly sensible macroeconomic policies and clearly efficiency-enhancing liberalization programmes.

Turning finally, to broader considerations that are not purely of an economic nature, some East Asian constants apply to China as they did to JTK. Thus, the population is broadly homogenous, the government has been authoritarian (indeed, a good deal more so than elsewhere), and demographic growth has been very subdued (even if population growth rates came down in China for reasons different from those that reduced them in JTK). More importantly, investment in human capital had already been substantial before rapid growth began. Table 2 presents estimates of the adult population's educational achievements at the outset of the periods here selected. It will be seen that despite China's relative poverty, its levels of human capital formation in 1980, while paling relative to those of Japan in 1950, were quite impressive by the standards of both Taiwan and many other much richer areas of the developing world.

3. Differences

Yet, not everything in China has run on lines similar to those of JTK. An interesting difference emerges in the area of income distribution. All four countries, thanks partly to early agricultural reforms, began their high growth years with relatively equal distribution patterns (indeed in China these were extremely equal by international standards). Interestingly, however, while these patterns were broadly maintained in JTK, they broke down in China. A country that still proclaims its socialist status, presided over an exceptionally rapid opening of income differentials [Naughton, 2007], possibly even more rapid than the one that occurred in Russia, following the breakdown of the Soviet Union. By now, China could be a society that is less equal than that of the United

⁹ There are virtually no comparable data on corruption, other than those which come from a body called Transparency International. These are only available from 1995 onwards. For that year they suggest the following levels of corruption (the higher the figure, out of a scale of 10, the greater is corruption's incidence): Japan 3.3, Taiwan 4.9, Korea 5.7, China 7.8. The absolute figures may not be very precise, the rankings seem plausible.

States. It is true, of course, that rapid growth lifted a large percentage of the population out of poverty, but then not dissimilar successes were also recorded in JTK, without this leading to the dramatic opening in income gaps that has been in evidence in China. Though efforts are now being made to try and mitigate some of the more extreme urban/rural and regional differences in income distribution that have emerged, particularly over the last decade, it is highly unlikely that China will be able to achieve anything like the income differentials that were (and to some extent still are) prevalent in JTK.

A possibly more important set of differences lies in the broad field of external competitiveness and industrial policy. Competitiveness mattered to the Chinese authorities just as much as it did to JTK, as indirectly shown by the very early creation (already in 1979, when the country was still almost autarchic) of Special Economic Zones devoted solely to export production. And many of the instruments initially used by China to improve its trade performance were similar to the policies used in JTK, e.g., various forms of protection (such as high tariffs and non-trade barriers to encourage import substitution), mandatory export targets for SOEs, as well as a panoply of other incentives [World Bank, 1993].

Yet, some of the policies used to pursue external competitiveness were strikingly different. Where Japan and Korea, in particular, emphasized plans for specific industries deemed to be important, China's industrial planning seems to have played much less of a role. Five-year plans were regularly published (partly to pay lip service to Communist ideology), enumerating sectors and activities chosen for promotion, but these, in fact, read like wish lists for almost everything. In the 1980s, for instance, "the Chinese state tried to interfere with too many industries" [Xia, 2000, p.90]. As an example, the industrial policy plan of 1989 wanted to foster some light industries, basic industries, intermediate products, machinery and electronics, light-tech industry, exports, infrastructure, etc., etc. The only sectors that were to be discouraged were going to be "low quality" products and "luxury" consumer goods [Lu and Tang, 1997]. In part this may, of course, reflect the country's dimension. JTK had to be selective, China could go for a "big push" strategy given that the size of its potential market would ensure scale economies in virtually any industry. Yet, comparative advantage applies to China just as to any other economy. And there does not seem to have been as conscious a design to "create" comparative advantage as there clearly had been in JTK. While help to industry was lavishly extended, it was overwhelmingly directed, in indiscriminate ways, at (the often inefficient) SOEs. It is these that obtained easy access to state-bank credits, were granted preferential tax rates, were assured of government purchases, etc., but, until recently at least, hardly figured among the major exporters.

China's external competitiveness was promoted not so much by targeting particular sectors or firms, but by a much less planned system, reliant on two major actors that find few equivalents in Japan and Korea, at least: the vast sector of small TVEs, nominally in public hands, but overwhelmingly private (or, in any case, neither controlled nor helped by the central authorities), and foreign firms [Huang, 2008]. The latter were particularly important. Using the trading skills of the Chinese diaspora in Hong Kong and Taiwan and the cheap labour and other facilities available in many of China's coastal provinces, foreign enterprises invested massively in the country. And in this China's policy has differed very importantly from the policies of JTK. Whereas those three economies were broadly hostile to most FDI, unless it could be directly harnessed to export production (as in Taiwan), China, especially from the early 1990s

onwards, welcomed it. Looking at the share of FDI in gross fixed capital formation over the four quarter centuries here considered, one finds stark differences: in Japan (1950-75), FDI accounted for 0.2 per cent of total fixed investment; in Taiwan (1960-85) and in Korea (1965-90) the corresponding figures were 2.4 and 1.6 per cent respectively, while in China (1980-2005) this ratio was as high as 7.0 per cent. While little help was extended to TVEs, “to the [limited] extent that the Chinese government has provided a space for private capital, it has shown a revealed preference for foreign over domestic firms” [Haggard and Huang, 2008, p.338].

Competitiveness would thus appear to have come more from spontaneous market forces than it did in JTK. In some ways, one principal source was the desire, indeed necessity, for small countries such as Honk Kong, but also Taiwan and Korea, “to provide space for the expansion of [their own] economi[es]” [Naughton, 1996, p.315]. It is true that from the mid-1990s onwards, China seems to have developed a more targeted approach to industrial policy, with priority given to certain sectors (or “pillars”), such as cars, petrochemicals, telecommunications, high-tech activities, etc. [Perkins, 2001; Naughton, 2007]. In the electronics field, in particular, the authorities did their best to obtain technology transfers from foreign owned enterprises, in exchange for market access, so as to create joint ventures first and national “champions” later [Rodrik, 2006; Zhao *et al.*, 2007]. A similar approach has also been followed in the car components sector. Yet the absence of an equivalent to MITI or the EPB, as well as the (already mentioned) greater diffusion of economic power to local governments, almost certainly reduced the effectiveness and coherence of these policies [Xia, 2000; Rodrik, 2006]. In any case, even when pressure was exerted on foreign firms to collaborate with, or help, specific domestic firms, this was hardly similar to Japan’s creation from virtually nothing of a nationally-owned polyethylene industry or Korea’s similar development of shipbuilding. The creation of China’s electronic industry was the result of FDI [Branstetter and Lardy, 2008]. The choice of sectors to be promoted, in other words, did not come from China. It was determined by major foreign investors, with the Chinese authorities merely trying to shift some of the rents to their chosen domestic players.

This points to a second major differences between China’s development strategy and that of JTK. The country’s external policy has been much more open than those of, especially, Japan and Korea. This was true not only for FDI, but also for trade. Chart 5 shows how rapidly the country’s foreign trade/GDP ratio rose over the period, especially if compared to what happened in Japan or even Korea.¹⁰ From the mid-1990s onwards, in particular, China began preparing for its eventual WTO entry and this involved a fairly radical dismantling of much of its protectionist apparatus [Branstetter and Lardy, 2008]. There would seem to have been much less opening in, for instance, the Japan of 1965, the Taiwan of 1975 or the Korea of 1980. Trade liberalization came, of course, eventually, as all three countries did away with their restrictive foreign trade regimes, but it had hardly happened by the end of the three quarter centuries here considered. China, on the other hand, opened earlier and in its WTO negotiations

¹⁰ The level figures shown in Chart 5 are, of course, strongly influenced by country size. Hence, it would be expected that Taiwan and Korea would show higher foreign trade/GDP ratios than Japan, let alone China. The latter’s figures are, however, much higher than might have been expected. It is true that the massive gap between Chinese GDP data in dollars and in PPPs, leads to an overestimate of China’s foreign trade ratio relative to those of more mature economies [Naughton, 1996] such as JTK. Even so, however, the rise in the ratio is still spectacular.

“agreed to a set of conditions that were far more stringent than the terms under which other developing countries had acceded” [*ibid.*, p.650]. And all the available evidence suggests that since China joined the WTO, it “has made reasonable progress towards meeting her obligations” [*ibid.*, p.633].¹¹

This much greater readiness to embrace an open world economy suggests that there is a third major difference between the development paths of China and of JTK. Given that export successes came from foreign and smaller enterprises, they turned out to have been concentrated, at least initially, in relatively light industrial products of a labour-intensive nature, as these firms went about exploiting the country’s factor endowment. While Japan and Korea, in particular,¹² targeted heavy industry and were able to gradually shift away from an initial export bundle that was either light industry- or natural resource-intensive, China went almost in the opposite direction, moving away from the very heavy industry that had been the hallmark of its industrialization in the central planning years and towards light manufacturing. Thus, the weight of SOEs in total industrial production plummeted from 80 to 15 per cent in the 25 years to 2000 [Perkins and Rawski, 2008] (SOEs are, of course, not synonymous with heavy industry, but the overlap is strong). The weight of TVEs and foreign enterprises, on the other hand, rose correspondingly. In some ways, China’s pattern of development and foreign trade specialization seems more similar to that of the South-East Asian countries than to the one of its three closer neighbours.

Some indirect confirmation of this is provided by Chart 6 which looks at the correlation in revealed comparative advantage (RCA) indices in 1980 and 2005 between China on the one hand and three other Asian areas on the other. China’s RCAs were hardly correlated with those of JTK in 1980. By 2005, not only had they not moved any closer; the correlation had actually become negative. A much more important overlap is shown to have existed over the period as a whole with what was happening in both South and South East Asia (the highest correlations are those between China on the one hand and Vietnam and Sri Lanka on the other). The 2005 data indicate that China seems to be leaving South Asia behind and approaching the trading patterns of South East Asia, but this still suggests a comparative advantage pattern largely rooted in factor endowment.¹³

It is true that over the period the country’s export bundle witnessed a significant structural transformation, not that dissimilar from the one experienced by JTK in earlier decades. China, just as Taiwan and Korea, abandoned its specialization in primary products and, just as Japan and Korea, shifted its comparative advantage to the machinery sector. Thus, the correlation coefficient between China’s RCA in 2005 and that of JTK in 1980 (at 0.44) is higher than any of those (bar one) shown in Chart 6. It should be noted, however, that while exports of machinery and information technology

¹¹ Circumstances were, of course, different in the more recent period than they had been earlier in the post-war world when FDI flows were small, trade controls were much more widespread, and exchange rates were, if not fixed, at least much stickier than they have been since the early 1970s, [Perkins, 2001].

¹² Taiwan did not neglect heavy industry, even if it did not give it quite the same importance as the two other countries. To quote one significant example, “all three East Asian governments controlled the market structure of the petrochemical industry by limiting the number of firms allowed to enter” [Kim and Ma, 1996, p.107].

¹³ Indeed, not much seems to have changed since, for instance, the early 1980s, when a simple correlation between RCA indices in 53 labour-intensive products in China and other developing countries, suggested that there was a significant overlap with the export structures of, for instance, Thailand, Sri Lanka, Vietnam or Indonesia (but also Korea) [Boltho *et al.*, 1994].

goods have risen rapidly, so have imports of components, suggesting that a good deal of what is done in the country is mere assembly work, relying on cheap domestic labour [Branstetter and Lardy, 2008]. In addition, these exports are very different from the machine tools, cars and ships which were sold by Japan and Korea in their rapid growth years. Thus, China's electronic sales abroad have lower unit values than those of, for instance, Korea, Malaysia or Singapore, an indication that they are likely to be, overwhelmingly, labour-intensive, low cost, high volume products [Rodrik, 2006; Naughton, 2007]. More broadly, it has been shown that while in recent years "China's manufacturing export bundle increasingly overlaps with that of the world's most developed economies ... within product markets, China's exports sell at an increasing discount relative to the exports of the OECD" [Schott, 2008, p.34]. This would seem to be further proof of a specialization pattern of an as yet developing economy, far from what had been achieved by JTK by the end of their quarter century growth bursts.

Conclusions

The foregoing has suggested, not unsurprisingly, that Chinese economic developments, since reforms began in the late 1970s, have shown both similarities and differences with those experienced by JTK in their high growth eras. The most obvious similarities are at the level of broad macroeconomic indicators and policies. GDP growth was exceptional in all four countries as were their saving and investment rates and their striking performances on the world market for manufactured goods. And while under-valued exchange rates may have played some role in boosting exports, neither this, nor rapid growth, were accompanied by high inflation and/or large budget deficits. On the contrary, all the four countries here considered followed macroeconomic policies that were broadly orthodox. Real interest rates were almost certainly held at positive levels in most years and budgets were usually kept in surplus. Few, if any, other developing economies could boast of such a record.

At a less aggregate level, however, differences do emerge. Differences also exist between the experiences of Japan, Korea and, especially, Taiwan. Yet, the gap between these three economies on the one hand and China on the other seems greater. At one obvious level it relates to the organizational structure of the four countries. JTK were (and, of course, still are) market economies; China began the period as a planned economy and, despite rapid liberalization, still maintains numerous aspects of central command. At the same time, however, the governments of JTK intervened quite heavily at the sectoral level, trying to influence their countries' industrial structure and forge their comparative advantages. China seems to have eschewed detailed industrial policies, allowing the flourishing of a largely unregulated private (and foreign) enterprise sector. While Japan and Korea consciously shifted their industrial structure from light to heavy industry, China, initially at least, found itself doing almost the opposite, by reducing the weight of the heavy industry it had inherited from its Maoist past. It was the much more spontaneous development of domestic TVEs and foreign firms, via FDI, that lies behind China's export specialization and extraordinary world market successes.

By East Asian standards, in other words, China may have been closer, at least in this aspect, to the experience of some South-East Asian countries than to that of the North-East Asian ones. But if one were to enlarge one's sphere of comparison to the rest of the developing world, then, surely, China's last quarter century of economic history would still seem to broadly fit the "East Asian Model of Development" that this paper discusses. Thus, Table 3 looks at growth rates in China, JTK and four other large

developing economies that at some time or other, over the last half century or so, have shown rapid growth rates over a 25 years period: Brazil, India, Mexico and Turkey. The differences between the two columns are striking.

A broader illustration of differences is provided by Charts 7 and 8, which use the simple visual technique of so-called “diamond” charts [e.g. Wade, 2004]. Data availability limits the scope of the comparison to simple macroeconomic indicators: four were chosen (GDP per capita growth, budget balances and saving rates in per cent of GDP, and changes in the share of the world market for manufactures over the various 25 year periods selected for each country). Chart 7 shows China’s performance in comparison with that of JTK; Chart 8 does the same in comparison with the other four developing economies. The conclusion that can be drawn from these diagrams would seem obvious: by North-East Asian standards, China may be a bit of an outlier; by broader comparative standards, it would seem to stand very firmly in the East Asian camp.

Bibliography

- Amsden A. (1989), *Asia's Next Giant: South Korea and Late Industrialization*, Oxford University Press, New York, NY.
- Aoki M., Kim H.-K., Okuno-Fujiwara M. (eds.) (1996), *The Role of Government in East Asian Economic Development*, Clarendon Press, Oxford.
- Aoki M., Murdock K., Okuno-Fujiwara M. (1996), 'Beyond the East Asian Miracle: Introducing the Market-Enhancing View', in Aoki *et al.* (eds.) (1996).
- Barro R.J., Lee J.W. (2000), 'International Data on Educational Attainment: Updates and Implications', *CID Working Paper*, **42**, April.
- Beason R., Weinstein D.E. (1996), 'Growth, Economies of Scale and Targeting in Japan', *Review of Economics and Statistics*, **78(2)**, 268-95.
- Boltho, A. (1985), 'Was Japan's Industrial Policy Successful?', *Cambridge Journal of Economics*, **9(2)**, June, 187-201.
- Boltho, A. (2002), 'Foreign Trade Performance', *Comparing Economic Systems: Italy and Japan*, A. Boltho, A. Vercelli, H.Yoshikawa (eds.), Palgrave, Basingstoke.
- Boltho A. *et al.* (1994), 'China's Emergence: Prospects, Opportunities, and Challenges', *World Bank Policy Research Working Paper*, **1339**.
- Brandt L., Rawski T.G. (eds.) (2008), *China's Great Economic Transformation*, Cambridge University Press, New York, NY.
- Brandt L., Rawski T.G. (2008), 'China's Great Economic Transformation', in Brandt and Rawski (eds.) (2008).
- Brandt L., Rawski T.G., Sutton J. (2008), 'China's Industrial Development', in Brandt and Rawski (eds.) (2008).
- Branstetter L., Lardy N. (2008), 'China's Embrace of Globalization', in Brandt and Rawski (eds.) (2008).
- Fry M.J. (1985), 'Financial Structure, Monetary Policy, and Economic Growth in Hong Kong, Singapore, Taiwan and South Korea', *Export-Oriented Development Strategies*, V.Corbo, A.O.Krueger, F.Ossa (eds.), Westview Press, Boulder, CO.
- Haggard, S. (2004), 'Institutions and Growth in East Asia', *Studies in Comparative International Development*, **38, 4**, Winter, 53-81.
- Haggard S., Huang Y. (2008), 'The Political Economy of Private Sector Development in China', in Brandt and Rawski (eds.) (2008).
- Huang Y. (2008), *Capitalism with Chinese Characteristics*, Cambridge University Press, New York, NY.
- Johnson C. (1982), *MITI and the Japanese Miracle*, Stanford University Press, Stanford, CA.
- Kim H. K., Ma J. (1996), 'The Role of Government in Acquiring Technological Capability: The Case of the Petrochemical Industry in East Asia', in Aoki *et al.* (eds.) (1996).
- Lardy N. (1994), *China in the World Economy*, Institute for International Economics, Washington, DC.
- Little I.M.D. (1979), 'An Economic Reconnaissance', *Economic Growth and Structural Change in Taiwan*, W.Galenson (ed.), Cornell University Press, Ithaca, NY.
- Lu D., Tang Z. (1997), *State Intervention and Business in China*, Edward Elgar, Cheltenham.
- Maddison A. (2003), *The World Economy: Historical Statistics*, OECD, Paris.

-
- Maddison A. (2009), 'Measuring the Economic Performance of Transition Economies: Some Lessons from Chinese Experience', *The Review of Income and Wealth*, **55(S1)**, July, 423-41.
- Naughton B. (1996), 'China's Emergence and Prospects as a Trading Nation', *Brookings Papers on Economic Activity*, **2**, 273-344.
- Naughton B. (2007), *The Chinese Economy, Transitions and Growth*, MIT Press, Cambridge, MA.
- Naughton B. (2008), 'A Political Economy of China's Economic Transition', in Brandt and Rawski (eds.) (2008).
- Okhawa K., Shinohara M. (eds.) (1979), *Patterns of Japanese Economic Development: A Quantitative Appraisal*, Yale University Press, New Haven, RI.
- Perkins D.H. (2001), 'Industrial and Financial Policy in China and Vietnam: A New Model or a Replay of the East Asian Experience?', *Rethinking the East Asian Miracle*, J.E.Stiglitz, S.Yusuf (eds.), Oxford University Press, New York, NY.
- Perkins D.H., Rawski T.G. (2008), 'Forecasting China's Economic Growth to 2025', in Brandt and Rawski (eds.) (2008).
- Qian Y., Weingast B.R. (1996), 'Institutions, State Activism, and Economic Development: A Comparison of State-Owned and Township-Village Enterprises in China', in Aoki *et al.* (eds.) (1996).
- Ranis G. (1985), 'Employment, Income Distribution, and Growth in the East Asian Context', *Export-Oriented Development Strategies*, V.Corbo, A.O.Krueger, F.Ossa (eds.), Westview Press, Boulder, CO.
- Rodrik D. (1994), 'King Kong Meets Godzilla: The World Bank and the East Asian Miracle', *Miracle or Design? Lessons from the East Asian Experience*, A.Fishlow *et al.* (eds.), Overseas Development Council, Washington, DC.
- Rodrik D. (1995), 'Getting Intervention Right: How South Korea and Taiwan Grew Rich', *Economic Policy*, **20**, April, 53-107.
- Rodrik D. (2006), 'What's so Special about China's Exports?', *China and World Economy*, **14(5)**, 1-19.
- Schott P.K. (2008), 'The Relative Sophistication of Chinese Exports', *Economic Policy*, **1**, January, 5-49.
- Vestal J.E. (1993), *Planning for Change: Industrial Policy and Japanese Economic Development: 1945-1990*, Clarendon Press, Oxford.
- Xia M. (2000), *The Dual Developmental State*, Ashgate, Aldershot.
- Wade R. (2004), *Governing the Market* (2nd ed.), Princeton University Press, Princeton, NJ.
- Wang T. (2004), 'China: Sources of Real Exchange Rate Fluctuations', *IMF Working Paper*, **WP/04/18**.
- World Bank (1993), *The East Asian Miracle*, Oxford University Press, New York, NY.
- Zhao Z. *et al.* (2007), 'China's Industrial Policy in Relation to Electronics Manufacturing', *China and World Economy*, **15(3)**, 33-51.

Appendix

Table 1: Macroeconomic Policy and Inflation

	General government net lending (in % of GDP)	Real lending rates ^a	Inflation	
			Wholesale prices	Consumer prices
			(average annual percentage changes)	
Japan (1950-70)	0.4	2.0	3.7	6.1
Taiwan (1960-85)	2.0	6.2 ^b	4.9	6.2
Korea (1965-90)	1.5	2.5 ^c	10.0	11.4
China (1980-2005)	1.1	2.2	5.3	5.9

a. Nominal lending rates minus GDP deflator.

b. 1962-85.

c. 1980-90.

Sources: The Bank of Korea, *National Income of Korea, 1982*; Haver Analytics; *Historical Statistics of Japan, Vol.III*; IMF, *International Financial Statistics (various issues)*; Korea Statistical Yearbook (*various issues*); OECD, *National Accounts of OECD Countries, 1950-1968, Economic Outlook Database*; Okhawa and Shinohara (1979); Oxford Economics Data Bank; *Statistical Yearbook of the Republic of China*.

Table 2. Educational Attainments

	GDP per capita ^a	Per cent of over 25 years old population with:	
		Full primary educ.	Full secondary educ.
Japan (1950)	1,921	22.4	15.7
Taiwan (1960)	1,492	13.7	4.6
Korea (1965)	1,436	33.5	7.8
China (1980)	821	12.2	5.6
Memorandum items (1970):			
Latin America	3,989	17.4	4.5
MiddleEast & N. Afr.	3,106	5.1	3.0
East Asia	1,685	17.4	4.7
Sub-Sah. Africa	1,011	4.4	1.7
South Asia	861	7.4	1.8

a. In 1990 dollars at purchasing power parity.

Sources: Barro and Lee (2000); Groningen Growth and Development Centre Database; Maddison (2003).

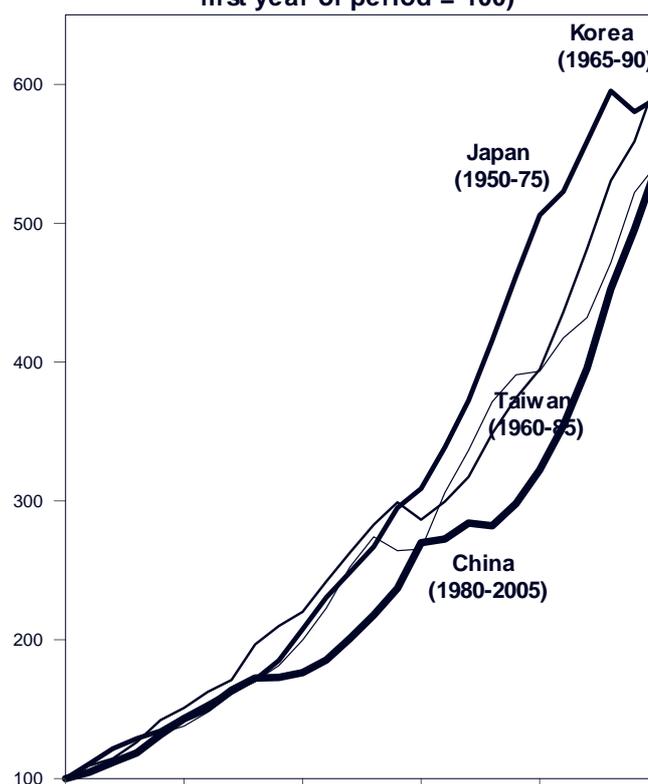
Table 3. GDP Per Capita Growth in Selected Developing Countries (average annual percentage changes)

East Asia		Others	
Japan (1950-75)	7.4	Turkey (1950-75)	3.6
Taiwan (1960-85)	7.0	Brazil (1955-80)	4.1
Korea (1965-90)	7.5	Mexico (1955-80)	3.4
China (1980-2005)	7.0	India (1980-2005)	3.9

Sources: Groningen Growth and Development Centre Database; Maddison (2003).

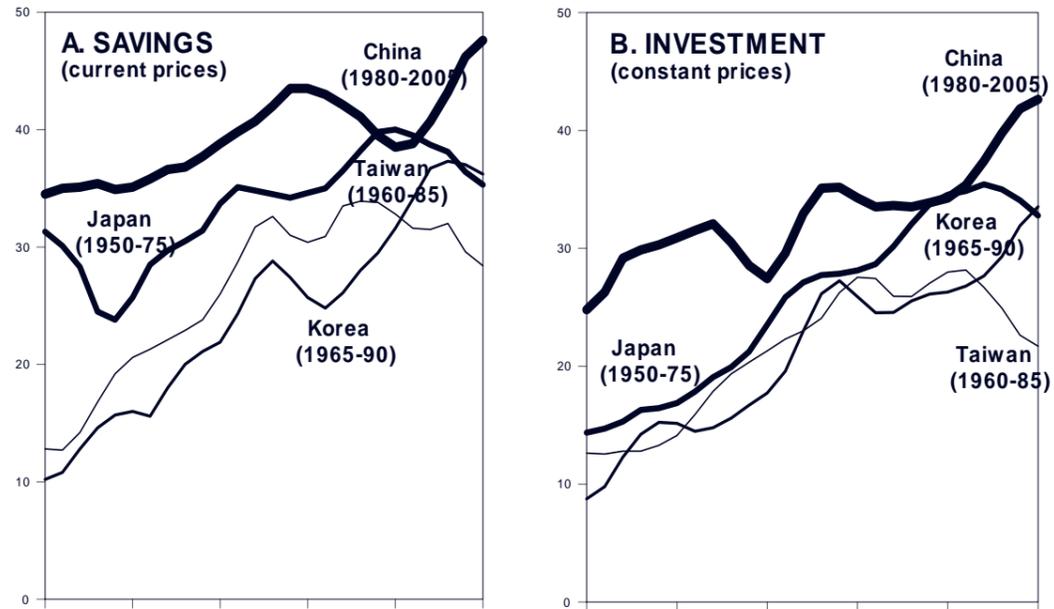
Chart 1. GDP PER CAPITA

(1990 \$; in purchasing power parities;
first year of period = 100)



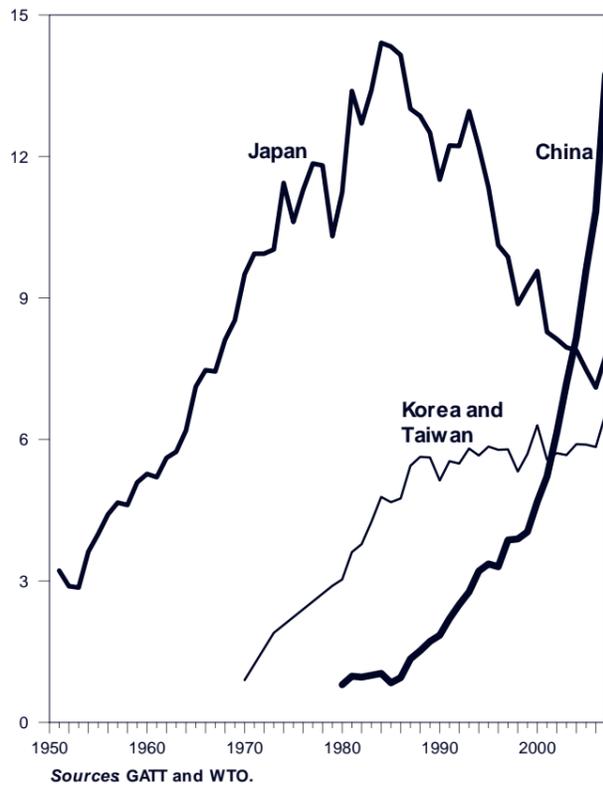
Sources Groningen Growth and Development Centre Database;
Maddison (2003).

Chart 2. GROSS DOMESTIC SAVINGS AND GROSS FIXED INVESTMENT
(in per cent of GDP; 3 years moving averages)



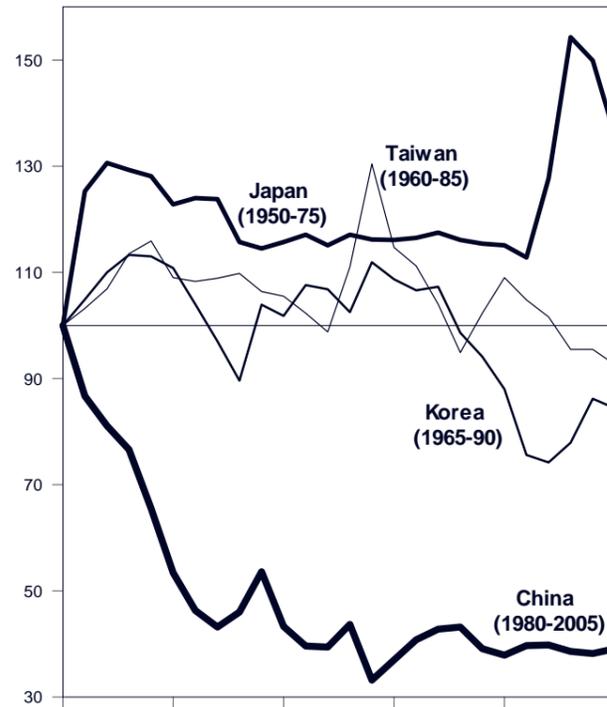
Sources Korea Statistical Yearbook; OECD, National Accounts of OECD Countries and Economic Outlook Data Bank; Okhawa and Shinohara (1979); Oxford Economics Data Bank; Statistical Yearbook of the Republic of China

Chart 3. EXPORT PERFORMANCE
Share in world exports of manufactures



Sources GATT and WTO.

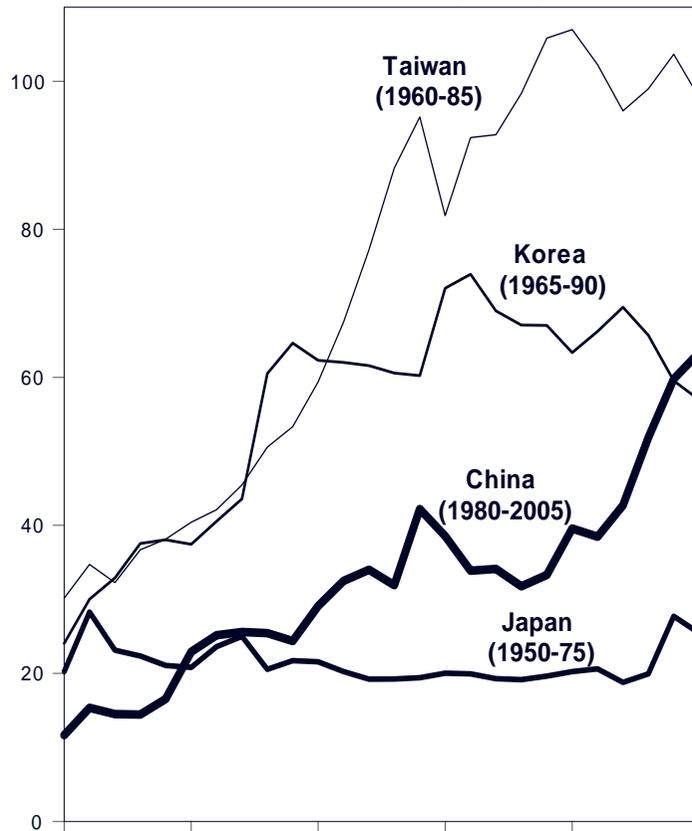
Chart 4. REAL EXCHANGE RATES*
(1st year of period = 100)



*Based on relative wholesale prices (for more detail, see text). Sources Central Bank of the Republic of China; Haver Analytics; IMF, International Financial Statistics; Oxford Economics Data Bank; US Department of Labor.

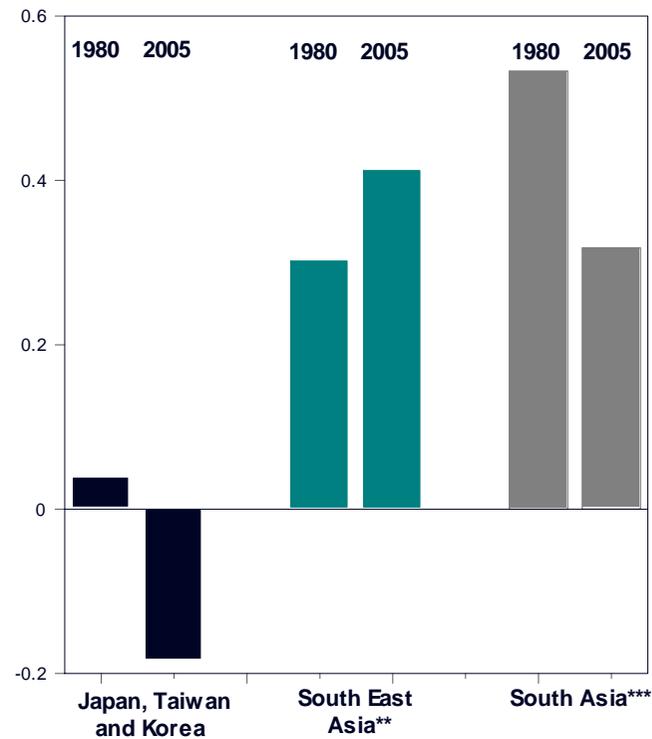
Chart 5. FOREIGN TRADE GDP RATIOS

(ratio of exports and imports of goods and services to GDP at current prices)



Sources Korea Statistical Yearbook; OECD Economic Outlook Data Bank; Okhawa and Shinohara (1979); Oxford Economics Data Bank; Statistical Yearbook of the Republic of China

Chart 6. CORRELATIONS WITH CHINA'S RCA* INDEX

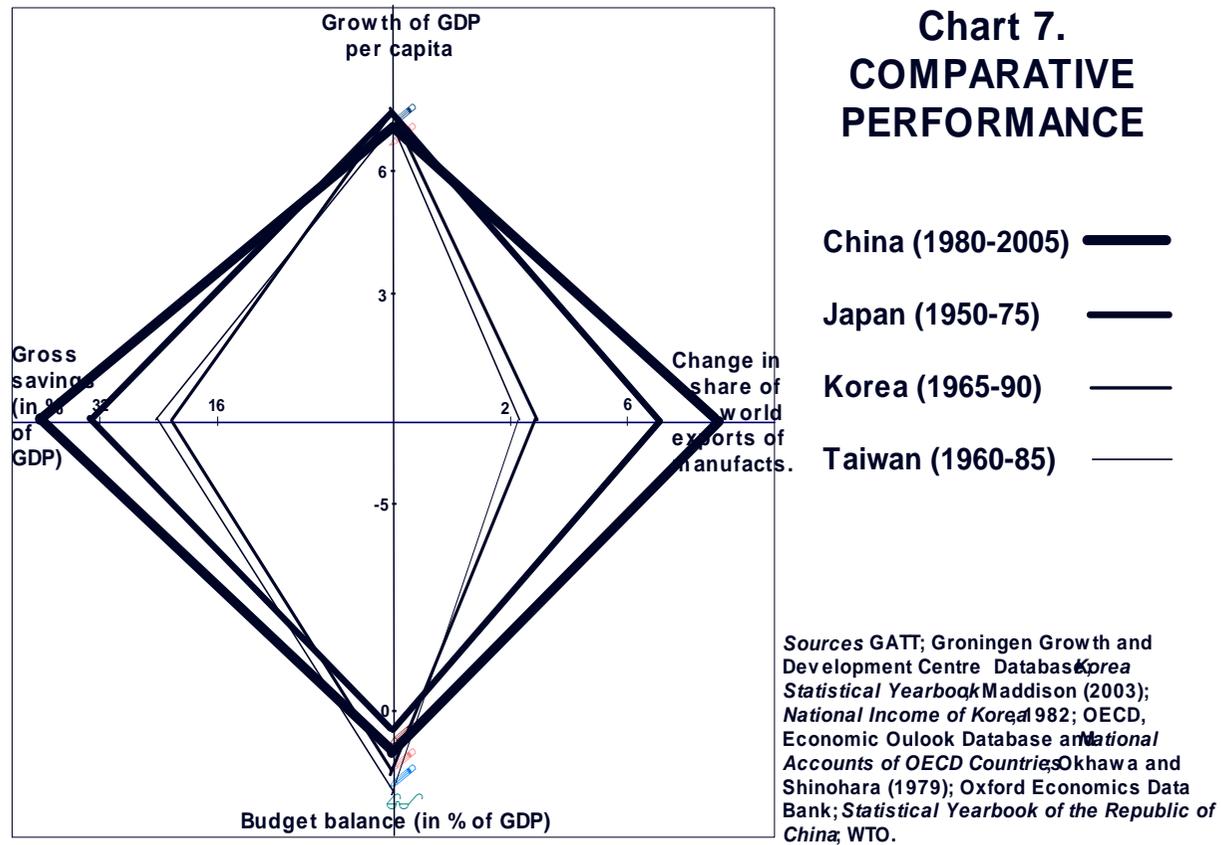


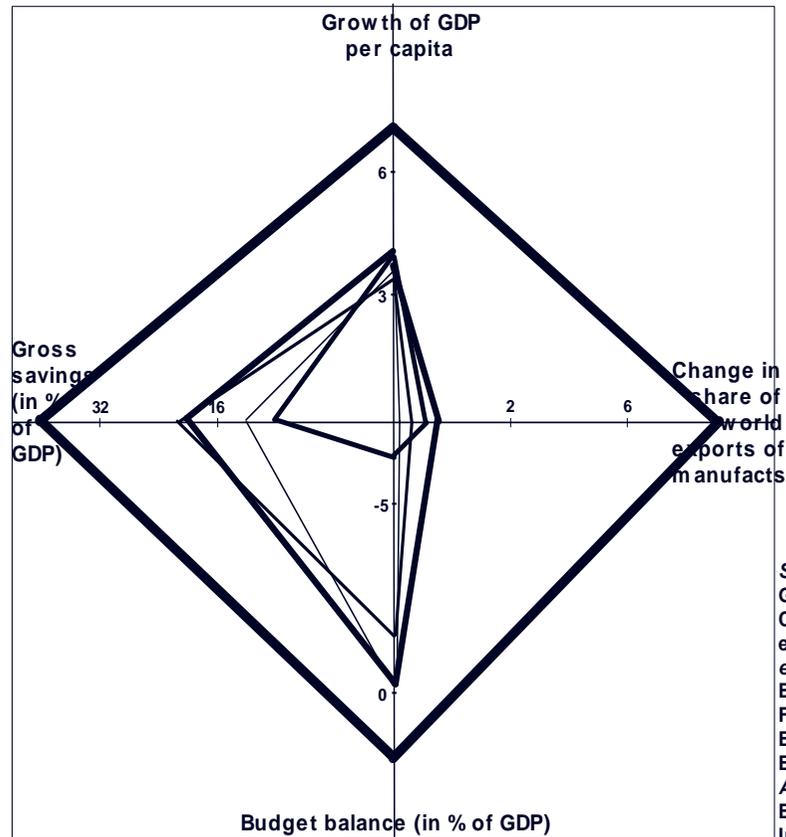
* Revealed comparative advantage indices for manufacturing exports at 3 digit SITC level.

** Indonesia, Malaysia, Philippines, Thailand and Viet Nam.

*** Bangladesh, India, Pakistan and Sri Lanka.

Source Statistics Canada.





**Chart 8.
COMPARATIVE
PERFORMANCE**

- China (1980-2005)
- Brazil (1955-80)
- India (1980-2005)
- Mexico (1955-80)
- Turkey (1950-75)

Sources *Anuario Estadístico de México*
GATT; Groningen Growth and Development
Centre Database; Instituto nacional de
estadística; *10 años de indicadores
económicos y sociales de México*; Instituto
Brasileiro de Economia, Centro de Estudos
Fiscais; Instituto Brasileiro de Geografia e
Estatística; *Estatísticas do século XX*; OECD,
Economic Outlook Database and *National
Accounts of OECD Countries*; Oxford
Economics Data Bank; Turkish Statistical
Institute, *Statistical Indicators, 1923-2007*
WTO.