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INDIA AND CHINA: CONTRASTS IN ECONOMIC LBERALIZATION?

by

Deepak Lal

James S Coleman Professor of

International Development Studies

University of California, Los Angeles

UCLA Dept. of Economics
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Address for correspondence: (till Sept. 1994)
2 Erskine Hill,
London NW11 6HB
Tel/Fax: 081-458 3713

ABSTRACT

The paper compares the recent economic liberalization in China and India in historical and cultural perspective. It finds greater similarities than differences in the initial conditions under which the reforms were begun, their motivation as well as in their extent and results. It also speculates on the likely course of reform in the future, which in both countries require the dismantling of loss-making state enterprises. The political uncertainties are underlined, though it is argued that Indian reforms may now be irreversible, unlike China, because of a more marked change in cultural attitudes, which has created a greater popular consensus for markets over mandarins.

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Judging from reports in the press, the 1990s is going to be the era of economic liberalization of the two great Asian giants India and China, which together account for over 2 billion of the world's 5.3 billion people. If the economic reforms underway are successfully completed, these countries could repeat the growth miracles of much smaller Asian economies, and like them should be able to eliminate mass poverty. This would indeed be the Great Transformation. But will the countries stay the course, and complete what judging from Latin American experience (e.g., in Chile and Mexico) can be an arduous journey through many rocky shoals, and which could take over a decade. Again from press reports as well as the assessments of various bankers appraising so-called emergent markets it would seem that whereas there is no doubt about China's ability to continue with what on paper emerges as its spectacular growth since the initiation of reforms at the end of the 1970s, the chances of India successfully unshackling its repressed economy are less bright. The main difference being in the differing political pressures impinging on the reformers in the two countries. In assessing the cultural context and political constraints on liberalizing India's economy -- the subject of this conference -- it may be useful, therefore, to hold up China as a mirror to see whether these currently fashionable judgments are valid.

In the comparative task I undertake in this paper, there are, however, two important caveats that the reader should bear in mind. First, whereas I have spent much of my professional life working on the past and present of the Indian economy, I can claim to be no more than a casual China watcher. Most of the generalizations and judgments made about China therefore remain open to much more serious doubt in my mind than those concerning India. Secondly, the differences in the comparative statistical bases of forming some objective judgment about economic performance in the two countries are so marked that even the most basic questions concerning the size and growth of national income and population in China cannot be answered with any great certainty, as compared with India. (We take this question up in greater detail when we try to form judgments on relative performance.) Having made two visits to China (in 1985, and 1993) and after talking to her officials and academics, one might feel that reasonable judgments might be possible. But one only has to remember the judgments made by other travellers to China in the 1960s and 1970s to know that appearances can be deceptive. One would hate to be merely a different type of fellow traveller!

Bearing these caveats in mind we can proceed to our comparative task. This is done in 3 parts. The first sets out the initial conditions in the two countries at their "independence" in the late 1940s, their respective development strategies and economic outcomes. The second attempts to delineate the reasons for reform and the stages it has followed and what the outcome has been in the two countries. The third tries to peer into the future, by attempting to answer the rhetorical question which forms the subtitle of the paper.

I. DIRIGISME

There are some striking similarities in the economic history of the two giant Asian economies both in the more distant and recent past.

Both countries were marked at "independence" in the 1940s by centuries of cultural stability and economic stagnation -- the subtitle of my <u>The Hindu Equilibrium</u> (on China see Elvin). The stagnation was in per capita income, so that with the relatively modest population growth of the past there was extensive growth (in Lloyd Reynolds felicitous phrase) but no obvious signs of intensive growth -- which leads to a secular increase in per capita income. This in turn was due in large part to both countries having made near perfect adaptations to the environments in which their respective "organic" economies had been placed. An "organic" economy is defined by Wrigley as "an economy bounded by the productivity of land" (p. 5). In such an economy -- and historically this has been the dominant type over the globe -- there is a universal dependence on organic raw materials for food, clothing, housing and fuel. Their supply is in the long run inevitably constrained by the fixed factor -- land. This was also true of traditional industry and transport. Most metal working industries were dependent upon charcoal (a vegetable substance) for smelting and working crude ores. Hence in an organic economy, once the land frontier is reached, diminishing returns will take their inexorable toll.

Both India and China had succeeded, by the middle ages, in creating economies which maintained what Elvin calls a "high equilibrium trap" (for India see Lal (1988)), which yielded an average level of living for their peoples which was the envy of the world at the time. But this was achieved through different forms of cultural stability and political organization. These differences in part reflected the differing ethnic compositions of the two countries. Whereas India has been a multi-ethnic society par excellence for millennia, China has been ethnically homogenous to a remarkable degree. Secondly, whereas political instability has been the norm in India, China has shown a remarkable political unity under centralized imperial rule for millennia. These differences did not however prevent the emergence of relatively stable Revenue economies (Hicks), and what I call predatory states (Lal (1988) Ch. 13.2) in both countries. The main cultural and political differences were: the decentralized form of social control as embodied in the Indian caste system, and the relatively autarkic village communities, in a polity which has usually been regionally fragmented and only rarely encompassed the subcontinent under Imperial rule (Lal (1988)); compared with the more centralized social control in an absolutist state -- in a relatively integrated national market -- run by Confucian mandarins in China, "which has remained united politically from Sung to modern times with only relatively brief periods of disruption between regimes" (McNeill p. 49) when the Mandate of Heaven was transferred from one dynasty to the next.

However, neither India or China could escape from their "high equilibrium trap" without moving as the West did from an "organic" to a mineral based energy economy, whose productivity is no longer bounded by the fixed factor of production -- land. Its centerpiece was the utilization of the capital stock of stored energy represented by fossil fuels, in particular coal, through the development of the steam engine, which provided virtually unlimited supplies of mechanical energy. "The prospects for growth both in the aggregate output and in output per head were entirely transformed from those which had previously obtained" (Wrigley, pp. 5-6). Secular intensive growth which could eradicate mass poverty had become feasible. This was different, qualitatively, from the type of intensive growth that Adam Smith had shown could be generated even within an organic economy, through the replacement of the mercantilist system by his form of "capitalism" and free trade. But the land constraint would always still remain binding.

Whereas for India there is little historical evidence of intensive growth of either type occurring before the modern era, for China there is evidence that the Smithian variety occurred in Sung China, and that all the technological ingredients were present for the emergence of the technologically determined variety. Thus McNeill summing up the effects of the commercialization and national integration of the economy under the Sung, states: "proliferating market exchanges -- local, regional, and trans-regional -- allowed spectacular increases in total productivity, as all the advantages of specialization that Adam Smith later analyzed so persuasively came into operation" (p. 29). (Also see Jones, Chp. 4.) Whilst Hartwell's work (cited in McNeill, p. 26) shows that the Chinese by the 11th century had coke fired blast furnaces for producing iron and steel, and had been using coke for heating and cooking for 200 years before this (p. 49). But they failed to develop the steam engine which could have harnessed this fossil fuel to provide the mechanical energy which would have broken the limits to intensive growth set by land. This was despite the fact that as Needham notes (pp. 96-7) they had developed all the ingredients which were required for its development. The subsequent stagnation of the Chinese economy despite this medieval creativity is one of the great historical puzzles, which goes beyond the remit of this paper. But there is one set of explanations which is relevant because of its contemporary resonance.

McNeill, Jones, and Lin for instance all relate the so-called Needham problem to the creation of the Confucian mandarinate, which was charged with implementing the "official doctrine [which] held that the emperor 'should consider the Empire as if it formed a single household'" (McNeill, p. 31). This household following Confucian values despised both soldiers and merchants. The mandarinate's task was to manage both, recognizing that both were needed to maintain the physical integrity of the Empire. "Systematic restraint upon industrial expansion, commercial expansion, and military expansion were built into the Chinese system of political administration" (p. 40). The market increased the economy's flexibility, and the resulting

> new wealth and improved communications enhanced the practical power Chinese officials had at their disposal. ... Discrepancies

> between the ideals of the marketplace and those of government were real enough; but as long as officials could bring overriding police power to bear whenever they were locally or privately defied, the command element in the mix remained securely dominant ... in every encounter the private entrepreneur was at a disadvantage, while officials had the whip hand. This was so, fundamentally, because most Chinese felt that the unusual accumulation of private wealth from trade or manufactures was profoundly immoral ... official ideology and popular psychology thus coincided to reinforce the advantage officials had in any and every encounter with merely private men of wealth. (McNeill, pp. 50-1)

Whether these attitudes have continued till today will be an important determinant of the future of the current economic liberalization in China. But it should be noted that the Communist system under which China sought to promote the modern form of intensive growth probably strengthened these traditional attitudes.

Similar atavistic attitudes to trade and commerce were also present in India, and were accentuated by the Fabianism adopted by most of its Westernized political and bureaucratic classes (Lal (1988)). Not surprisingly, therefore, they too found the Soviet model resonant in their drive for industrialization -- though in the softer tones associated with a democracy. The resulting industrial policy framework was also by and large similar as both countries followed hot house industrialization through the promotion of heavy industry under the aegis of state enterprises. Both followed relatively autarkic trade policies accompanied by a battery of trade and exchange controls, which progressively cut any link between domestic and world relative prices. This had well-known deleterious effects on the economy's efficiency and thence productivity. Both also systematically discriminated against agriculture by taxing it directly or indirectly. But this policy went much further in China during the Maoist Great Leap Forward and the establishment of communes. This was a disaster. It led to one of the worst famines in human history, and set back Chinese agricultural productivity for a decade. This policy was completely reversed by the establishment of the "household responsibility system" in the late 1970s. By contrast India switched in the late 1960s towards various policies to promote agriculture, which led-in ecologically suitable parts of the country -- to what is termed the Green Revolution.

From the late 1970s, moreover, both countries have been gradually trying to escape from the dirigiste system of controls of trade and foreign industry that they had previously set up. We need to briefly outline the consequences of this dirigisme, which might provide reasons for this move to liberalization, which is discussed in the next section.

A comparison of the relative performance of the two giant Asian economies is bedeviled by statistical problems relating to estimates of Chinese GDP and population. By contrast Indian national income figures and population data are much more secure. The problems with the Chinese data -- which have sadly been used even by reputable international organizations like the World Bank -- can be readily highlighted by looking at the implications of the World Bank estimates of per capita GNP and its growth rate between 1965-1990 in India and China. According to the World Bank (1992, World Development Indicators, Table 1) the average rate of growth of per capita income was 5.8% for China and 1.9% for India over this period. The level of per capita income in 1990 was $370 for China and $350 for India. These figures imply that per capita incomes in China in 1965 could only have been 41% of India's. As Srinivasan rightly comments:

> No knowledgeable analyst of the two countries would subscribe to this relative value of China's GNP per capita in 1965! A plausible explanation for these paradoxical figures is that the figure of $370 in 1990 as China's per capita GNP reflects the consideration that a more realistic figure might soon make China ineligible for loans from IDA, the soft loan affiliate of the World Bank. (p. 5)

(Also see Lardy, Appendix B.) Nor has the scholarly discussion reached any measure of agreement (see Rawski, Ma and Garnaut, Kumar). For the base period, 1950, the most plausible inference is Kumar's: "The per capita income of both India and China was very low in 1949 and given the margin of error, it is not worth arguing about which country was the poorer" (p. 30). Furthermore the distortions in the Chinese relative price structure where there were few links between prices and the respective marginal rates of substitution in consumption or of transformation in production, make any inferences of Chinese productive capacity or welfare from its GNP at domestic prices highly dubious. Purchasing power parity estimates of Chinese GDP have however been made by Heston et al., and by Maddison, and are summarized in Table 1. Given all the problems surrounding the basic data and the price comparisons made, these can at best provide broad orders of magnitude, and of the two, in my judgment, the Maddison estimates ring truer!

These problems of estimating Chinese GDP are compounded by problems in estimating its population. The only proper censuses in China were in 1982 and 1990. All earlier estimates are based on partial surveys. Moreover the numbers emerging from the recent 1990 census are marred by the under-reporting of female births due to the "one child" population policy (see Zeng Yi et al.)

So what can we conclude on relative performance? It would appear that till the late 1970s China grew faster than India. This was largely due to differences in the rates of growth of industry. The rate of growth of agricultural output was about the same. In China between 1952-78 (before the introduction of the household responsibility system) it was 2.9%, in India between 1950 and 1986 it was 2.6%; whilst grain output grew at 2.4% in China and 2.6% in India (Srinivasan, p. 20). But the performance of both was well

TABLE 1

Comparative Growth Performance

		Growth Rates, % p.a.		
		GDP	GDP/POP	POP
(A) Heston et al., Estimates				
CHINA	1960-73	4.6	2.3	2.3
	1973-80	5.3	3.7	1.6
	1980-88	9.2	7.8	1.4
INDIA	1960-73	2.5	0.2	2.3
	1973-80	2.3	0.0	2.3
	1980-88	5.0	2.8	2.2

NOTE: POP column derived from Heston et al., estimates as GDP-GDP/POP

		Per Capita GDP GDP/POP ($)	Growth Rates (% p.a.) GDP/POP	GDP
(B) Maddison Estimates				
CHINA	1950	415	2.76	5.06
	1973	774	3.46	5.06
INDIA	1950	399		
	1973	513	1.08	3.38
	1987	662	1.06	3.27

NOTE: Growth rate figures are derived from Maddison's estimates of GDP/POP($), and from POP in (A)).

below that of the Asian NIC's in terms of industrialization and other developing countries (e.g., Kenya,Indonesia and Pakistan) in terms of agricultural growth. Reported social indicators appear to be better in China than India, but the overall level of inequality, particularly in rural areas was about the same (the Gini coefficient was 0.31 in 1979 for rural China and 0.34 in rural India in 1973-76 (World Bank (1983), Table 3.19). "Though the same sources report a somewhat higher inequality in urban income distribution in India, because of the large weight of rural areas in both countries overall income distribution was roughly similar" (Srinivasan, p. 18). Despite different political systems, the overall performance of the two economies in their dirigiste post-independence phases was thus not too dissimilar -- in particular well below their respective potential!

II. REFORM

In discussing reforms it is useful to distinguish between the policy induced distortions created by irrational dirigisme in commodity and factor markets.

China has suffered from marked distortions in all of these markets. Its complete delinking between world and domestic prices until the early 1980s, the reluctance to change the controlled prices that were set in the early days of planning in the 1950s, and the comprehensive control of trade and foreign exchange through state monopolies meant that no economic rationality could be adduced to the resulting domestic price structure. Though India too had many distortions in its domestic price structure, they were never likely to have reached the Chinese extreme. In both cases the dirigiste system systematically discriminated against exports. In the relatively more open "mixed" Indian economy this resulted in periodic balance of payments crises, one of which in 1966 led to the first abortive attempt at liberalizing the external sector. From then on, there were long drawn out and convoluted attempts to remove the bias against exports through various forms of indirect subsidization of exports. These did have the effect of providing some modest boost to exports. This process of trade liberalization was supplemented by some easing of industrial licensing and fiscal reform in Rajiv Gandhi's early administration. But many of the promised reforms of the foreign trade system (replacing QR's by tariffs), and the public sector ("easing exit of unviable units" Economic Survey 1985-6) remained merely plans, as the government became embroiled in the Bofors scandal and reform was put on the back burner. It was not till the macroeconomic crisis of 1991 forced India into the arms of the World Bank and the IMF that a more serious attempt at liberalization was undertaken.

This crisis which threatened international bankruptcy for India, and the response to it, was a replay of dramas enacted in many parts of Latin America in the 1980s. I have charted the anatomy of this cycle of economic repression -- macroeconomic crisis -- reform elsewhere, in greater detail (Lal (1987, 1993), Lal and Myint). Two points, however, which are relevant for my present purposes may be noted. First these crises are fiscal crises caused by the unsustainability of the vast system of politically determined entitlements to income streams created by past dirigisme in the micro-economy. Second they arise when all possible means of financing them seem to be at an end. One means is through taxation. But tax revenues are less than buoyant both because growth has been damaged by the productivity damaging effects of dirigisme, and because of the inescapable rise of the "black" economy as more and more seek to escape the taxed economy. With entitlements growing, at some stage a fiscal deficit will emerge. This can only be financed by three means: internal or external borrowing or the levying of the inflation tax. Given underdeveloped domestic capital markets, internal borrowing is limited. So the usual option is to increase foreign borrowing. India did this, and in an echo of China (but with important differences in the form) tried to tap the riches of its worldwide diaspora (the non-resident Indians-NRIs). But as in Latin America this capital inflow was short term and hence volatile. With the continuing political instability and little sign of improvement in the productivity and hence capacity to repay of the economy, these investors are at some stage likely to take fright. This leaves only the inflationary tax. But this too is unsustainable, as economic agents take countervailing action -- in a democracy as inflation shy as the Indian, also through the ballot box. The ensuing crisis appears as a balance of payments and fiscal crisis, and it provides a small window of opportunity for radical reform. This, at the most basic level involves rescinding all the politically determined entitlements created by dirigisme -and therein lies the rub. For the losers already know who they are, whilst the gainers from the increased productivity which results from liberalization are potential, i.e., unknown. For this reason I have been an advocate of a "big bang" when a crisis presents an opportunity for reform.

India, faut mieux, did not follow this apparently politically risky course for a minority government. Besides success in macroeconomic stabilization it made some headway in dismantling the mercantilist system of industrial licensing, price controls and trade and exchange controls. But it failed to rescind one of the major entitlements -- secure jobs in the loss-making public enterprises, and the bloated bureaucracies in State and central governments, in para-statals and the nationalized banking sector. With the passions aroused by the Ayodhya issue, and the accompanying political reverberations, the reform process seems to be stalled. Speculations about its future are left to the next section.

Of the factor markets -- the land market (most of which is rural) has been virtually free in India. The major factor market distortions are in the market for labor in the so-called organized sector, and in the capital market through the workings of the nationalized banking sector.

China, by contrast, had severe distortions in all its factor markets in addition to those in the commodity market. Its land market was extinguished with collectivization. The practice of assigning jobs bureaucratically for life to urban workers, together with in effect strict controls of migration, froze the labor market. Whilst in the command economy of a Communist country there was clearly no place for a capital market. Factor markets require some delineation of property rights to exist. Under Chinese communism with everyone a ward of a State which had socialized all property -- including individual labor -- there could be no factor markets!

But the extinguishing of land and labor markets in Chinese agriculture also led to a rapid denouement. With the establishment of the communes during the Great Leap Forward, as Li Xiannian is reported to have told one visitor: "the peasants simply downed tools and turned their bottoms to the sun" (cited in Evans, p. 250)! The resulting famine was the worst in the world in this century. The setback to agricultural output and productivity was not reversed till the household responsibility system restored virtual private property rights in land (see Cheung (1990)). Total factor productivity in agriculture did not reach its 1952 level till 1983 (Lin (1990) p. 1246).

The start of the Chinese reform process is, thus, rightly identified with the rural reforms. They began with the partial dismantlement of the communes in 1962, but did not reach fruition till the household based farming system was established in 1979. Their impetus was one of the important historical lessons of China's thousand year history of dynastic transitions -- the link between food production and political and social stability. "This political wisdom is capsuled in an often cited motto 'wu nong bu wen' (without a strong agriculture, the society will not be stable) in the agriculture policy debates in China" (Lin (1990a) p. 151). The results were dramatic.

> The growth rate of grain in 1952-78 was 2.4 percent per year, only 0.4 percent above the population growth rate. The per capita availability of grain, therefore,increased only 10 percent over a quarter of a century. ... Between 1979-84, agricultural output and grain output, respectively, grew at 11.8 percent and 4.1 percent annually while population grew at 1.3 percent in the same period. Although agriculture as a whole still grew at a respectable rate of 4.1% p.a. after 1984, grain production has, nevertheless, stagnated after reaching a peak of 407 million tons in 1984. ... The main reason was the failure of the government to implement a market-oriented price reform for grain. (Lin, pp. 150-1)

What this suggests is that, the marked rise in the post-1979 Chinese growth rate was largely the result of making up ground after the disaster of the Great Leap Forward. Its basis was the household responsibility contract, which "comes very close to what in the Western world is a grant of private property in land. The clear, if minor, departure is that the Chinese version takes the form of leasehold instead of fee simple; that is the contract is not in perpetuity" (Cheung, (1990), p. 23). Whilst informants during a visit in 1993 informed me that whilst the land cannot be sold (as it belongs to the State), leases can be transferred or sold, so various forms of tenancy have arisen as the initial owners of the lease move to other more lucrative occupations. This privatization of land was not resisted by the cadres because they "often end[ed] up with several responsibility contracts" (Cheung (1986) p. 66)!

The liberalization of commodity markets in China began with the partial trade liberalization of 1972, following Nixon's opening to China. However, unlike the rural reforms, these were "motivated largely by geopolitical and strategic considerations and not by economic factors. Relations with the West ... were improved to enhance China's leverage vis a vis the Soviet Union not because there was a high level political consensus that China should abandon its long-time policy of self-sufficiency" (Lardy, p. 11). The Cultural Revolution which seems to have caused more havoc to the party than the economy (see Evans (1993)), set back this process of opening to the West. But this political theme was reasserted with Deng Xiaoping's victory over the Gang of Four. The result was that "between 1978 and 1990 the average annual pace of trade expansion was in excess of 15 percent, over three times the rate of growth of world trade" (Lardy, p. 11). This raised China's share of world exports, which had fallen from 1.25% in 1952-55 to 0.75% in 1978, to 2% in 1991. By contrast India's share of world exports "declined from over 2% in the early 1950s to stabilize around 0.5% in the 1980s" (Srinivasan, p. 12). To put these figures in perspective it may be noted that Korea with a population of 43 million in 1990 (compared with 1134 million for China and 850 million for India) exported more (U.S. $65 billion) than China (U.S. $62 billion) and India (U.S. $18 billion). Given the distortions in Chinese GDP estimates it is much harder to provide a firm conclusion of the changing degree of openness of the Chinese as compared with the Indian economy. Lardy after a detailed discussion concludes that: "if Block's calculation of China's GDP in 1980 is taken as meaningful ... the trade ratio in China rose from 5.8% in 1978 to 9.4% by 1988. If the Summers and Heston estimate is taken as meaningful, the trade ratio rose from 2.1% to 3.4% over the same period" (p. 154). Whilst in the earlier period if the World Bank (1983) is to be believed the trade ratio in 1980 was the same as in 1950. By contrast India, for which the data is more secure, "the share of trade in GDP fluctuated -- until the early sixties it averaged over 12%, only to decline to a low of less than 10% in the early 1970s and to slowly rise thereafter to about 16% in 1979-80" (Srinivasan, p. 12).

From this it appears that despite the media hype, China remains more of a closed economy than India, and that its "spectacular" export performance is only so judged by a reference point of near autarky! Once again, as in agriculture, an economy even more highly repressed than India's has shown a spectacular performance relative to its immediate past only because of how far it lay inside its production cum trade feasibility frontier.

But this raises the question: why is China's growth rate about twice India's? The answer lies in the rate of investment, which in 1990 was nearly 40% of GDP in China as compared with 23% in India. There is little evidence that the productivity of investment (and changes in it due to the reforms that have so far taken place) are all that different in the two countries. Thus for China, according to the World Bank, total factor productivity in agriculture and industry combined declined at an annual rate of -1. 41% between 1957- 65, rose at only 0.62% during 1965-76, and in the reform era (1980-88) grew at 2.4% in the state sector, 4.63% in the collective sector and 6.44% in the agricultural sector (World Bank (1992), Table 2.3). Given the statistical difficulties outlined earlier these cannot be taken as hard figures but merely as indicating trends. For India Ahluwalia's estimates for industry indicate that total factor productivity in manufacturing grew at 3.4% in the first half of the 1980s as compared with a decline of 0.3% per annum in the previous 15 years.

This inference about the similarity in the performance of the two countries is made more secure, if the nature of the trade liberalization that has taken place in the two countries to date is compared. Using the phase methodology developed in the Bhagwati-Krueger study (see Krueger for details), Srinivasan has categorized the past trade history of India in terms of the following phases (where higher order phases categories more liberalized trade and payments regimes): 1956-62 (Phase I); 1962-66 (Phase II); 1966-68 (Phase III); 1968-75 (Phase II); 1975-85 (Phase III); 1985-mid 1991 (Phase III continued); Mid 1991-(Phase IV?). For China Lardy argues in a thorough analysis of its trade reforms that the trade liberalization that has taken place since the late 1970s should be taken as

> reflecting a transition from a stage one to a stage two liberalization of an import substitution trade regime. ... The previous direct monopoly on all trade transactions exercised by the Ministry of Foreign Trade corresponds to Krueger's stage one in which there is heavy reliance on quantitative restrictions. Stage two is characterized by increasingly complex quantitative restrictions rather than across the board restrictions of phase one. ... China's increasing use of import duties, export subsidies, and other types of price measures designed to buttress quantitative restrictions is also common to phase two. (p. 43)

as are the various import entitlement schemes based on retention of foreign exchange which grew in the 1980s. Given the continuing large divergences between domestic and international prices (until the 1990s) as documented in Lardy's Table 4.2, it is more than likely that many of the exports which were privately profitable were not socially. Evidence of this exists for India (see Lal (1990)). For China, Lardy believes this was also the case and that "in at least a few cases the value added of energy intensive export products measured at international prices was negative" (p. 96).

Moreover, just as the phase 2 and 3 type reforms in India were motivated less by a conversion of the policymakers to the case for free trade, than by the exigencies of the balance of payments, Lardy's careful analysis suggests that something very similar lay behind the gradual trade liberalization in China to date. In the centrally planned Chinese economy, with a state monopoly of foreign trade, there will not be any unplanned imbalance between the value of imports and exports measured in foreign currency. However, because of the separation between domestic and international prices (an "airlock system" according to the World Bank (1985) p. 97), characteristic of the Chinese command economy pre 1978, there could be a surplus or deficit on the trade balance in domestic currency even when in terms of foreign currency it was in balance. As Lardy shows "reforms of China's foreign trade system frequently have been stimulated by the occurrence of domestic currency losses on foreign trade" (p. 20).

Both India and China were wary in the past of private foreign capital inflows. An essential element in their reform programs is a reversal of this policy. An important part of the opening up of China involved the creation of special economic zones in Southern China and the active promotion of direct foreign investment in joint ventures. These have largely taken place with non-state enterprises which represent the extension of the rural household responsibility system to industry. These are so-called village, township and collective enterprises. They and direct foreign investment has boomed. Here again, like India, China has sought to mobilize the capital of its international diaspora for its development. But the nature of the capital inflow has been different because of the differing nature of the two streams of migrants. Whereas the Indian diaspora (at least of its more affluent members) has largely consisted of the professional classes, the Chinese diaspora, particularly to Hong Kong and Taiwan, was of entrepreneurs -- many of whom had migrated form Shanghai and Canton after the Communist takeover. Thus whereas India could at best hope to mobilize short run capital inflows in the form of bank deposits and bonds, China was able to get foreign equity from its diaspora. Apart from the bundle of entrepreneurship, technology and marketing this brings, it also makes a debt crisis of the Latin American variety less likely. On the other hand, given the large distortions in the domestic price structure, and the accompanying large variance of effective protective rates, there is likely to be little correspondence between the private and social profitability of such direct foreign investment (see Lal (1975)).

The growth of the non-state enterprise sector in China, where from all accounts much of recent Chinese growth outside agriculture has taken place, has in effect meant the growth of a <u>de facto</u> private sector. But the property rights of the individuals who have established these enterprises and are seen to be their de facto owners are not recognized <u>de jure</u>. This is because of the ideological imperative of preserving the fiction of state ownership of assets, so that "private property may be practiced in nature, but not in name" (Cheung (1990) p. 25). This puts a limit on the capitalist process whereby individual's rights to income streams from capital can be traded. This distortion in the efficient working of the capital market cannot be removed without giving up the ideological fiction and converting the <u>de facto</u> into <u>de jure</u> private property rights in the non-state sectors.

This fortunately is not a handicap India shares with China. But the problems of dealing with state enterprises are similar. In both countries, though the forms differ, most state enterprises essentially provide unviable politically enforced entitlements to future income streams to their managers and workers. In both for political reasons there has been a reluctance to rescind them. Instead, there is an attempt to work around them by, as it were, building a cordon sanitaire around these enterprises, and ensuring that the problem is contained rather than reduced or eliminated. The hope is that with the growth of the rest of the economy, the share and hence the deadweight cost of these enterprises to the economy will progressively decline. But in the interim, in both countries they continue to hemorrhage the fisc and cast a shadow over the sustainability of the limited reforms that are currently in place.

The problem is particularly deadly in China because of the Communist fiscal system. In the pre-reform period, the state enterprises were the primary tax collecting vehicle -- as in other communist countries. Wong describes this as follows:

> The pre-reform fiscal system in China ... [had] overwhelming dependence on industry, and a reliance on profits of state-owned enterprises, along with taxes for government revenue. Using administrative prices that systematically discriminate against agricultural and raw materials producers in favor of industry, artificially high profits are created in the industrial sector. These are then captured for government coffers through a combination of turnover taxes and expropriation of profits. (p. 10)

However, as the process of liberalization proceeds "effective property rights devolve more to the (state-owned) enterprises themselves, and perhaps to a narrowly enfranchised private sector. ... By giving up control over state property, the government in effect gives away its tax base" (Mckinnon (1992) p. 7). Furthermore, even if the government hangs onto its state enterprises, as China has done, the freeing of commodity markets still erodes the revenue base as:

> First, the price system can no longer be rigged to keep agricultural procurement prices -- and thus real product wages -- artificially low so as to transfer an easily captured surplus to industry. Second, industrial enterprises -- owned by the central or diverse local governments that had generated monopoly profits -- may now face substantial competition from each other (as amongst township enterprises in China), from newly enfranchised private or cooperative enterprises, and (possibly) from freer imports. The upshot is that the industrial profit base itself will tend to decline as the monopoly positions of the old

> state-owned industrial enterprises are undermined.
> (Mckinnon, p. 7)

This is borne out by Blejer et al.'s estimate that the consolidated revenue of the central, provincial and local governments in China fell from 34% of GNP in 1978 to only 19% in 1989, and most of the fall was accounted for by a fall in "profit remittances" from state-enterprises.

This erosion of its traditional tax base has forced the government to in effect create a form of tax farming- with local governments contracting with the center to share revenues form local non-state industry. This has greatly eroded the power of the central government. With local governments also increasingly concerned by the large regional divergences in industrialization and in inflows of private investment, internal trade barriers to bottle up domestic resources and to "protect" local factors of production are reportedly growing, giving rise to fears (as one informant put it) of economic warlordism!

The resultant periodic macroeconomic crises that have beset China on its path to liberalization have been caused both by the loose budget constraint faced by the state enterprises and their own inviability at international prices. With the domestic prices of 90% of Chinese imports being based on the international price by 1990 (as compared with 43% in 1984), but with domestic export prices still being relatively insulated from world prices, the financial losses of the state enterprises have mounted. "In 1990 the total of their losses amounted to $20 billion, getting on for 5 percent of national income" (Evans, p. 312). This has dire consequences for macroeconomic balance.

The inflations that ensued were cured by the traditional means of monetary deflation. This in effect choked off credit to the state enterprises, which are then unable to finance the unviable entitlements which the

Chinese government is still unwilling to rescind. There is, thus, a built in conflict between the needs of liberalization and the desire to maintain socialist state enterprises. This is reflected in the continuing debate between those officials who seek "a return to the system of centralized foreign exchange planning and foreign exchange control on the one hand, and more rapid movement toward convertibility on the other" (Lardy, p. 111). This debate between the conservatives and the reformers was supposed to have been settled at the recent Central Committee meeting. But the Financial Times concluded that the communique which was issued traded off some monetary easing (desired by conservatives keen to preserve state enterprises) for a further commitment to deepening reform (desired by the reformers). It reflected "not a consensus but a failure to a agree. ... What is lacking ... is a willingness by central and regional officials to allow enterprise to go bankrupt, to accept that richer provinces must pay higher taxes, and to obey central bank directives" (Financial Times, editorial, 16 Nov. 1993).

India, too despite its more orthodox and transparent macroeconomic system of control has not been able to tackle the problem of large budgetary subsidies for fertilizers, energy, the public distribution system, and those implicit in carrying loss making public enterprises and redundant labor in the central and state bureaucracies.

These continuing unviable entitlements in both countries, are largely related to the labor market. In pre-reform China, labor markets were much more rigid than in India, There was little labor mobility, and the following features which still characterize state-owned enterprises applied virtually to the whole economy (as there were restrictions on rural-urban and inter-regional migration). Lardy notes that still "in the state-owned sector, most workers continued to be assigned permanent jobs when they finished their education. Workers had no right to quit or leave their assigned jobs and enterprises had no right to dismiss redundant labor. Furthermore, workers were dependent on their work units for their housing, medical care, retirement pensions, and a range of other benefits." But with the growth of non-state enterprises, the government has relaxed the requirement that all employment be assigned by the state. This has led -- at least in Southern China -- to the virtual privatization of the labor market, except for the existing workers in state enterprises who maintain their guaranteed job security and retirement benefits (see Cheung (1990) p. 23-4).

In India, the rigidities in the labor market are largely confined to the organized sector and are based on labor legislation which goes back to the 19th century, as well as on the implicit commitment of a job for life in the government and public enterprises (see Lal (1989)). No attempt has been made in India to rescind these entitlements. As in China the hope is that by allowing the rest of the "non-distorted" economy to grow around this incubus (which itself will not be allowed to grow), its relative weight will decline over time. But given the budgetary implications of maintaining these entitlements in the near future, it is unclear whether, in either case, reform can continue without some successful confrontation of these deeply entrenched vested interests.

A crisis is usually the ideal time to deal with such deep-seated political problems. India has probably left it too late after its 1991 crisis to deal with the necessary reform of its labor market. The Chinese have yet to experience a similar macroeconomic crisis. But if the dynamic process observed in other countries faced with living with the consequences of dirigisme is anything to go by, such a crisis -- which may provide the

Chinese polity the necessary will to deal with these politically determined entitlements -- may not be too far off!

Given the similarities rather than differences in the course of liberalization and the roadblocks in its continuation, as well as in the pre-reform "initial" conditions, the similar effects -- in terms of some boost in productivity and growth rates -- as reform progresses, which were summarized above, are only to be expected!

III. FUTURE

What of the future of reform in the two countries? Again, though the current euphoria in the media and financial circles about China, in contrast with the growing despondency about India -- beset by various ethnic and religious conflicts -- might suggest that, the course of reform is assured in China but not in India, appearances can once again be deceptive. As we have seen, the obstacles in the path of reform are essentially political in both cases -- and involve the dismantling of systems of unviable entitlements, in particular to organized labor and the bureaucracy. It might appear that a dictatorship committed to reform would find it easier to do so than a democracy. But it is this question of commitment which is in question in both countries.

Recently The Economist summarized the necessary conditions for successful liberalization that have emerged from Latin American experience in the catch phrase, "commitment, competence and consensus". This, it argued, in Latin America involved "(1) people at the top committed to it, (2) other people technically qualified to implement it, (3) a national trauma, such as hyperinflation, that lives on in the memory of voters as a horror to which they never wish to return" (Economist, Nov. 13, L.A. survey, p. 14). Of these conditions the second seems to be met, as there are undoubtedly competent technical teams in both countries capable of implementing reform. It is doubts about the first and third conditions which give one cause to pause in both countries.

Take the condition regarding commitment. What is the degree of commitment to reform of the current leaders in the two countries? In India though there can be no doubt about the commitment of the Finance Minister Dr. Manmohan Singh, and to date of the Prime Minister Narasimha Rao, the same cannot be said of the other members of the ruling political party, nor of the major opposition parties. This is largely because of the long ideological shadow that, what has been termed, "Nehruvianism" -- a variant of Fabianism -- still casts on the minds of the political and intellectual classes. The press comments by both ministers and many (but by no means all) press commentators were hostile to many of the eminently sensible suggestions made in the July 1993 Bhagwati-Srinivasan report commissioned by the Minister of Finance. The old shibboleths -- maintaining some form of socialism to help the poor, for which the public distribution system as well as parts of the public sector, and a continuing ban on consumer goods imports are deemed essential -- despite all the countervailing evidence (see e.g., Lal (1988), Bhagwati(1993)) were yet again on display. The long-standing and atavistic Brahminical disdain for commerce and trade was also in evidence, as was the continuance of a prickly nationalism -- as some took umbrage at an official report written by NRI economists!

This nationalism, however, provides some hope for the future. One of the important themes of the Lal-Myint comparative study is the role of "nation-building" in explaining the rise of dirigisme and its reform. For the dirigisme which is invoked to foster "order", leads over time to the unintended consequence of breeding disorder, as economic agents seek increasingly to escape the official net. Liberalization is then undertaken by nationalists to restore order in what seem to have become ungovernable economies. Heckscher's historical work on mercantilism provides an almost exact parallel in this cycle of dirigisme -- disorder -- liberalization, in post Renaissance Europe. The Indian case as I have briefly indicated in the previous section fits this thesis. Hence if nationalism is still alive and well in India, it may lead its adherents to see that further liberalization is essential to acquire the economic strength without which the nation will not be safe from disorder, originating from within or without. The media hype about China has helped in this context.

Moreover there has been a remarkable alteration in the climate of public opinion, where the empowerment of the common man against the many tyrannies of the permit raj promised by the reformers, gladdens many middle class hearts hankering after Western style consumerism! Whilst the relatively shrinking rewards from public service as compared with those in the private sector are persuading many of their children to seek commercial careers. This should help to undermine the long-standing Brahminical attitudes against Banias. These cultural attitudes which in the past favored seemingly selfless mandarins over selfish markets have also been undermined by the contempt in which nearly all politicians and many bureaucrats -- seen as equally corrupt -- are increasingly held by the public. If both mandarins and markets are now seen as "corrupt" (in the Augustan sense -- see Pocock (1975), Lal (1985)), the ethical preference for the former is undermined, and the efficacy of the two alternatives in promoting "opulence" becomes the paramount consideration. Even the partial liberalization that has so far taken place may have helped to strengthen this shift in attitudes towards the market. One straw in the wind is the very different reaction that Prime Minister V.P. Singh's desire to implement the Mandal Report on caste reservations in government jobs evoked from the Universities compared with the virtual silence that greeted the Rao government's actual implementation of the report on instructions from the Supreme Court. Some commentators in India have suggested that with the liberalization undertaken in 1991, job prospects in the private sector look much brighter to the upper caste young than in the public sector, so the policy of reservations is of lesser relevance to their future!

Against these hopeful signs are more dire ones -- based on interest. The major potential losers from the reform are businesses in previously protected sectors, and the bureaucracy. The interlocking interests of the politicians, industrialists and bureaucrats in perpetuating the rents generated by the Permit Raj which financed politics, are well known. An alternative source of electoral finance is still not in place; without it, the continuing commitment of Indian politicians to economic liberalization must remain questionable. Whilst the losers amongst the businessmen are already grouping together and lobbying for more gradual reforms as well as various concessions to allow them to play on an "equal playing field" with foreign investors. Implicit threats are being made that they might finance the BJP which has played the populist anti-foreign card, and argued for internal liberalization with no (or little) liberalization of foreign trade and direct foreign investment. Interestingly though, the newer business groups (e.g., the Ambanis) have lobbied for a faster process of liberalization as they unlike their older brethren feel they can compete in global markets.

The most recalcitrant group is likely to be the bureaucrats. It is not the production workers in public sector enterprises who are the problem --

they can be pensioned off through the National Renewal fund. It is the white collar bureaucracy, numbering in the millions. They all seek the job security, perks and perquisites of the All India services, and seek like them to enlarge the base of their respective job pyramids so that there are more worthwhile jobs on top. In the traditional Indian casteist framework they want to protect not merely their incomes but status! They include not only the officers but also the karamchari unions in nationalized banks, para-statals, and the central and state governments. The government has not tackled the thorny issue that a large number of them will have to be made redundant, in the interests of both economic efficiency and the fisc. The example of the DGTD, whose functions became redundant with the ending of industrial licensing, does not augur well for the future. Evidently, even though redundant, the officers of the DGTD still come to their offices even when there is no work for them, and continue to draw their pay and perquisites!

There are clearly many rocks ahead in the path of Indian economic reforms. The technical competence is there, and I have argued that there is also a general consensus in the country for reform, but the commitment of the politicians and hence the credibility of the reforms must still remain in doubt.

What of China? Here I can do no more than speculate on the basis of what little we know of the inner workings of the Chinese government. Unlike India there would seem (at least as long as Deng Xiaoping is alive) that those committed to reform in the Chinese polity will remain on top, purely because Deng has repeatedly reiterated his continuing support for reform. This raises the question of why Deng supported liberalization and how if at all he envisages it to proceed. A few clues are provided in a recent biography by a former U.K. Ambassador to China (Evans (1993)). Three themes emerge. Deng as a passionate nationalist, secondly a man keen on preserving the Communist party, and the morale of its members and thirdly, a socialist for whom socialism "was associated with prosperity ... [and who] was ready to try a wide variety of means in the quest for prosperity" (p. 146). He did not have any particular economic theory to guide him. Evans reports him as saying: "I am a layman in the field of economics. I have made a few remarks on the subject, but all from a political point of view. For example I proposed China's economic policy of opening to the outside world, but as for the details or specifics of how to implement it, I know nothing" (Evans p. 236). We also learn from Evans that during one of his periods of disgrace Deng turned to reading Chinese history and his speeches thereafter reflected this "education". It is pure speculation, but if he did read the history of the Sung, could that not have provided him with the vision of a vigorous China ruled by mandarins under an imperial dynasty which nevertheless tolerated a market economy and the prosperity it begat? It would reconcile "the contradictions many outside China have seen between Deng's 'readiness to experiment boldly in the economic sphere and his political conservatism'. Far from seeing political liberalization as a necessary condition for economic liberalization, he has seen it as a serious potential threat to social and political stability and therefore to development" (Evans, p. 219).

If Deng's commitment to reforms (as long as they are controlled by the party) is assured, that cannot be said of the rest of the party. The debates between those who want to return to planning and those who want to go further in economic liberalization still continues, and given the past history of the turns in the roulette wheel in intra party disputes, it would be foolhardy to predict what the outcome will be when Deng meets Marx.

As in India there are conflicting tendencies. First, the sapping away of both administrative and fiscal authority from the Centre has made the regions and their officials more powerful in determining China's future. Those in the South have benefitted personally from all forms of effectively privatized enterprise in which they and their relatives have become partners. Second, the army (from all accounts) has also taken to joint ventures and commerce in a big way. These constitute important groups whose self-interest must now lie in continuing reform. This effective co-option of appartchiks and the army in reform, in contrast to India, makes the commitment of the political elite to reform much more credible.

Though it may seem redundant to discuss any popular consensus about reform in a dictatorship, Chinese history is replete with examples where -- whilst authoritarian dynastic rule has been the norm -- a dynasty could see another replace it, if in the eyes of the people it lost the Mandate of Heaven! Here, as in India, the dirisgiste system established by the Communists did conform with atavistic cultural attitudes. It is impossible to judge how far the current dynasty and in particular the reformers have been tarred with the visible signs of the blatant rent-seeking and corruption which has accompanied economic liberalization.

Finally, as regards competence, the Chinese suffer from having lost a whole generation of youth to maleducation during the Cultural Revolution. The only technically sound economists are very young, and though there are enough of them now around the world, it is difficult to judge whether they can be put together into a team and given their head, as India has been able to do spectacularly.

Thus for slightly differing reasons, but ultimately because of problems concerned with politics and culture the reforms in both China and India remain insecure. So though, as ever, the potential of the two Asian giants remains immense if only they could be unshackled from dirigisme, it is not as yet certain that it will be realized. My conclusion therefore is that, whilst a modest investment in their emerging market funds is probably a decent gamble, they do not as yet provide for long term foreign investors, nor their own people, a certain road from rags to riches!

REFERENCES

Ahluwalia, I.J. (1991): Productivity and Growth in Indian Manufacturing, Oxford University Press, New Delhi.

Blejer, M. et al. (1991): China: Economic Reform and Macroeconomic Management, IMF Occasional Paper 76, Washington DC.

Bhagwati, J. (1993): India in Transition - Freeing the Economy, Clarendon Press, Oxford.

Bhagwati, J., and T.N. Srinivasan (1993): India's Economic Reforms, Ministry of Finance, Govt. of India, New Delhi.

Block, H. (1981): The Planetary Product in 1980: A Creative Pause?, Bureau of Public Affairs, US Dept. of State, Washington DC.

Cheung, S. (1986): Will China Go 'Capitalist'?, 2nd ed., Institute of Economic Affairs, London.

__________ (1990): "Privatization vs. Special Interests: The Experience of China's Economic Reform," in Dorn & Xi (eds.)

Dorn, J., and Wang Xi (eds.) (1990): Economic Reform in China -- Problems and Prospects, University of Chicago Press, Chicago.

Elvin, M. (1973): The Pattern of the Chinese Past, Methuen, London.

Evans, R. (1993): Deng Xiaoping, Hamish Hamilton, London.

Heckscher, E. (1955): Mercantilism, 2 vols, rev. 2nd ed., Allen and Unwin, London.

Heston, A., and R. Summers (1991): "The Penn World Table: An Expanded Set of International Comparisons, 1950-1988," Quarterly Journal of Economics, vol. CVI, May.

Hicks, J.R. (1969): A Theory of Economic History, Clarendon Press, Oxford.

Jones, E.L. (1988): Growth Recurring- Economic Change in World History, Clarendon Press, Oxford.

Kumar, D. (1992): "The Chinese and Indian Economies from ca 1914-1949," Research Programme on the Chinese Economy, CP No.22, STICERD, London School of Economics, London.

Lal, D. and Associates (1975): Appraising Foreign Investment in Developing Countries, Heinemann Educational Books, London.

__________ (1980): Prices for Planning- Towards the Reform of Indian Planning, Heinemann Educational Books, London.

__________ (1985): "Nationalism Socialism and Planning," World Development, vol. 13, no. 6, reprinted in Lal (1993).

__________ (1987): "The Political Economy of Economic Liberalization," World Bank Economic Review, vol. 1, no. 2, reprinted in Lal (1993).

__________ (1988): The Hindu Equilibrium, vol 1: Cultural Stability and Economic Stagnation, Clarendon Press, Oxford.

__________ (1989): The Hindu Equilibrium, vol 2: Aspects of Indian Labor, Clarendon Press, Oxford.

__________ (1993): The Repressed Economy-Causes, Consequences, Reform, Economists of the Twentieth Century Series, Edward Elgar Publishing, Aldershot.

Lal, D., and H. Myint (forthcoming): The Political Economy of Poverty, Equity and Growth -0 A Comparative Study, Clarendon Press, Oxford.

Lardy, N.R. (1992): Foreign Trade and Economic Reform in China 0- 1978-1990, Cambridge University Press, Cambridge.

Lin, J.Y. (1990): "Collectivization and China's 'Agricultural Crisis' in 1959-1961," Journal of Political Economy, vol. 98, Dec.

__________ (1990a): "Institutional Reforms in Chinese Agriculture: Retrospect and Prospect", in Dorn & Xi (eds.)

__________ (1992): "The Needham Puzzle : Why the Industrial Revolution Did Not Originate in China", UCLA Dept. of Economics Working Paper No. 650, Los Angeles.

Ma, G., and R. Garnaut (1992): "How Rich is China: Evidence From the Food Economy," Working Paper, Dept. of Economics, Research School of Pacific Studies, Australian National University, Canberra.

Maddison, A. (1991): "Postwar Growth and Slowdown : A Global View," in G. Gahlen, H. Hesse and H.G. Ramser (eds.), Wachstumstheorie Und Wachstumpolitik, J.C.B.Mohr, Tubingen.

McKinnon, R.I. (1992): "Macroeconomic Control in Liberalizing Socialist Economies: Asian and European Parallels," Pacific Basin Working Paper Series, No. PB92-05, Federal Reserve Bank of San Francisco.

McNeill, W.H. (1983): The Pursuit of Power, Blackwells, Oxford.

Needham, J. (1969): The Grand Titration -- Science and Society in East and West, Allen and Unwin, London.

Pocock, J.G.A. (1975): "Early Modern Capitalism -- The Augustan Perception," in E. Kamenka and R.S. Neale (eds.), Feudalism, Capitalism and Beyond, Arnold, London.

Rawski, T.G. (1989): Economic Growth in Prewar China, University of California Press, Berkeley.

Reynolds, L.G. (1985): Economic Growth in the Third World, 1850-1980, Yale, New Haven.

Srinivasan, T.N. (1993): "Overview" and "Economic Liberalization and Future Prospects," in Srinivasan et al. (1993).

Srinivasan, T.N. et al. (1993): Agriculture and Trade in China and India: Policies and Performance Since 1950, ICEG, ICS Press, San Francisco.

Wong, C. (1991): Economic Reform in China, Asian Development Bank, Manila.

World Bank (1983): China: Socialistic Economic Development, vol. 1, Washington D.C.

_________ (1985): China: Long Term Issues and Options, Johns Hopkins, Baltimore.

_________ (1992): World Development Report 1992, Oxford University Press, New York.

_________ (1992a): China: Reform and the Role of the Plan in the 1990s, Washington DC.

Wrigley, E.A. (1988): Continuity, Chance and Change: The Character of the Industrial Revolution in England, Cambridge University Press, Cambridge.

Zeng Yi et al. (1993): "Causes and Implications of the Increase in China's Reported Sex Ratio at Birth," Population and Development Review, vol. 19, June.