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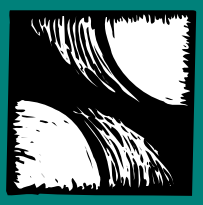

ASIA PROGRAM

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China's Economy: Will the Bubble Burst?

ABSTRACT: The three essays in this Special Report discuss China's economy from various perspectives. Charles Wolf Jr. of RAND challenges a generally prevailing consensus that China's economy will be able to sustain high rates of economic growth by highlighting eight potential challenges China may encounter over the next decade. Thomas G. Rawski of the University of Pittsburgh argues that the Chinese government's poor decisions on investment and bungled management of existing fixed assets will keep China on the current path of low growth, stagnant employment, and widespread over-capacity in the years to come. Deborah S. Davis of Yale University believes China's "software advantage" in human resources will promote continued economic development. While these essays differ as to whether China's economy will sustain high-speed growth in the years ahead, none of them predicts the country's economy will soon collapse.

Introduction

Gang Lin

China's new leadership claims it will continue to focus on the country's economic development, with a goal to quadruple the country's gross domestic product (GDP) within 20 years. Over the past two decades, Beijing has declared an apparently impressive annual economic growth rate of nearly 10 percent. However, the widespread SARS epidemic in China has brought about an unexpected challenge to the country's economy. Whether China can maintain its economic miracle in the years to come is uncertain, considering possible shrinkage of foreign direct investment due to SARS and other epidemic diseases, numerous loss-making state enterprises, millions of unemployed urban workers, billions of dollars of bad bank loans, and increasing social inequality.

Will the bubble burst? What are the potential adversities that China's economic development will encounter over the next decade? How severe an impact on China's overall economic performance will ensue if these adversities occur, either separately or together? Are Chinese boasts of swift economic growth over the past decade or two built on political fantasy? If so, what would be the realistic growth rates of the Chinese economy in the past and near future? To what degree will the central government continue to inject capital into inefficient state enterprises? How likely and in what ways will China maintain its economic growth in the wake of growing global competition? The following three essays address these and related issues from various points of view, factoring in both the strengths and the weaknesses of China's economy.

The first essay, by **Charles Wolf Jr**. of RAND, challenges a generally prevailing consensus that China's economy will be able to sustain high rates of economic growth. From a macro perspective, Wolf highlights eight potential adversities China may encounter over the next decade. These challenges include 1) unemployment, poverty, and social unrest; 2) negative economic effects of corruption; 3) HIV-AIDS and epidemic disease; 4) water

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resources and pollution; 5) increasing energy consumption and prices; 6) fragility of the financial system and state-owned enterprises; 7) possible shrinkage of foreign direct investment; and 8) potential conflict with Taiwan. Each of these adversities could plausibly lower China's annual GDP growth rate to a range between 0.3 and 2.2 percent.

Because these adversities are interdependent, the occurrence of any one of them will increase the probability that others will ensue. While China is unlikely to suffer from all of these adversities, the occurrence of several in a cluster is highly likely. According to Wolf, should all of these problems occur at the same time, China's economic growth would be reduced by over eight percent annually, thus registering negative numbers for China's economic performance as a whole. This, of course, is the worst scenario. As Wolf clarifies at the beginning of the essay, his research project deliberately concentrates on what might go seriously wrong in China's economy, and does not devote equivalent attention to potential sources of resilience that could offset these adversities. Nor does he explore the means by which China might prevent, mitigate, or remedy its problems.

In the next essay, **Thomas G. Rawski** of the University of Pittsburgh points out the unreliability of Chinese statistics regarding economic growth in recent years. Although official Chinese statistics provided a generally accurate measure of national economic achievement between 1978 and 1997, Rawski argues, these numbers were distorted by an upward bias from 1998 to 2001 because local officials often exaggerated economic performance to satisfy Beijing's growth targets. In other words, national economic growth probably fell far short of official claims in recent years.

While opening China's economy to increasing foreign contact has made an unexpected contribution to the country's huge economic gains of the past two decades, the main sources of growth for China are related to domestic factors. According to Rawski, China's huge size makes unlikely a massive increase in foreign shares of the country's investment structure. The potential for high-speed growth in the future lies in, among other things, the continued boom of labor-intensive industry and the development of private business. Because western China is relatively undeveloped, China's labor-intensive industries can extend their lifetimes through westward movement as rising wages and land costs erode their profitability in eastern China. However, persistent restrictions on the scope, financing, and legal protection of private business have prevented China from fully utilizing the advantages of the private economy. Rawski predicts that the Chinese government's poor decisions on investment and bungled management of existing fixed assets will keep China on its current path of low growth, stagnant employment, and widespread over-capacity in the years to come. It will therefore be difficult for China to regain its high-growth rate of the first two decades of reform.

The third essay, by **Deborah S. Davis** of Yale University, provides a sociological perspective on China's economic development. Davis observes that China has achieved sustained and substantial gains in per capita income and consumption over the past two decades, with declining rates of extreme poverty. However, it also experienced a rapid increase in income inequality, creating a large gap between urban and rural incomes. The major winners in contemporary China are a minority of men with high education, especially high-ranking government officials or those working in managerial positions in private or private-public hybrid firms in large coastal cities. The losers are agricultural laborers and manual workers in urban and rural enterprises.

Despite the increasing income inequality, Davis believes China's economy will continue to grow. Demographically, the situation is far from dire; during the 1990s the percentage of the population

under age 15 or above 64 slightly declined, and that of working age exceeded 70 percent of the total population. In terms of education, China has significantly reduced illiteracy, increased rates of secondary school attendance and graduation, and improved access to post-secondary education. Moreover, China still retains a national health system capable of effective coordination and mass education, and life expectancies increased to 68.7 for men and 73 for women during the 1990s. These "human software" advantages should help sustain China's economic growth and create greater prosperity over the next 5 to 10 years, Davis predicts.

In his commentary on these three essays when they were first presented at a Woodrow Wilson Center seminar, Fenwick W. Yu of the U.S. Department of Commerce emphasized the positive impact of China's entry into the World Trade Organization (WTO) on its economic development. According to Yu, China's WTO membership will force Beijing to protect intellectual property rights, develop the rule of law, and reform China's state-owned enterprises and banks through global market competition.

While none of these three essays argues that China's economy will soon collapse, they differ as to whether China's economy will maintain high-speed growth in the years ahead. China's economic future hinges on, among other things, the severity of he challenges China will face, and how successfully Beijing develops the country's private business and labor-intensive industries, utilizes its software advantages in human resources, and responds to global market competition.

Fault Lines in China's Economic Terrain

CHARLES WOLF JR.

This essay addresses the following key question: What are the major challenges, fault lines, and potential adversities (these terms are used synonymously) that China's economic development will encounter over the next decade, and how severe an impact on China's overall economic performance will ensue if these adversities occur separately or in clusters? Thus, we deliberately concentrate on what might go seriously awry in the economy and, in the process, slow or even reverse China's double-digit growth rates in the 1980s and high single-digit growth in the 1990s and the early part of the 21st century. We do not devote equivalent attention to the means by which China might prevent, mitigate, or remedy these adversities. Nor do we consider the potential sources of resilience and strength that could offset or absorb these adversities.

This asymmetry is deliberate. Its intent is to provide a countervailing perspective to what has been a generally prevailing consensus—with a few notable exceptions—that China's economy will be able to sustain high rates of economic growth for the indefinite future.

In considering what might go seriously wrong in the Chinese economy we have focused on eight domains. For each, we estimate a "bottom-line" in terms of expected effects on China's annual growth rate over the next decade, drawing on a variety of methods, models, and judgments to make these estimates. Most of the problems that we examine are ones that China has confronted in the past and, notwithstanding, has managed with sufficient success to sustain high rates of economic growth. Consequently, our focus is on whether and by how much these adversities might be worsened in the future, and with what effects.

Our principal findings together with estimates about the corresponding "bottom-lines" can be summarized as follows:

Unemployment, Poverty, and Social Unrest

Open and disguised unemployment in China amounts to about 170 million, or 23 percent of the total labor force. Recent and prospective increases in unemployment have been principally due to population increases in the 1980s, and the privatization and downsizing of the often inefficient, loss incurring state-owned enterprises. China's efforts to comply with its World Trade Organization (WTO) commitments may engender more unemployment. Rural poverty has led to increased income inequality between rural and urban areas, rural-to-urban migration, rising urban unemployment, and social unrest.

Potential worsening of these adversities may cause a reduction between 0.3 and 0.8 percent in China's annual growth rate in the coming decade, as a result of lower factor productivity, lower savings, and reduced capital formation.

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Economic Effects of Corruption

To calibrate corruption in China and to link it to China's expected economic performance, we have drawn on two established indices of corruption and their association with differing quintile positions in annual economic growth rates of the various countries included in the indices. If corrupt practices in China were to increase—as a result of plausible though not demonstrable recent trends—the result would be to lower China's position in the quintile distribution linking economic growth with the prevalence of corrupt practices.

The result of this adverse shift would be a reduction of about 0.5 percent in China's expected annual growth rate.

HIV-AIDS and Epidemic Disease

Estimates by the United Nations and other sources place the prevalence of HIV-AIDS in China between 600,000 and 1.3 million, with an approximate annual rate of increase between 20 and 30 percent per year. To analyze the effects of possible further deterioration, the effects of several scenarios are simulated, which include varying estimates of the costs of therapy, the impacts of disease on factor productivity, and on per capita output. The bottom-line estimate for the "intermediate" rather than "pessimistic" scenarios is a trajectory of annual deaths from HIV-AIDS between 1.7 and 2.7 million a year in the second decade of the 21st century, cumulating by 2020 to over 20 million casualties, and associated with annual reductions in gross domestic product (GDP) growth between 1.8 and 2.2 percent in the period from 2002 to 2015.

Water Resources and Pollution

China is beset by a perennial maldistribution of natural water supplies. The North China plain, with over a third of China's population and at least an equivalent share of its GDP, has only 7.5 percent of the naturally available water resources. Subsurface aquifers in North China are near exhaustion, and pollution discharges from industrial and other sources further aggravate the shortage of water for consumers and industry. By contrast, South China normally has an abundance of natural water supplies, sometimes leading to serious floods. The dilemma this poses for China's policy makers is whether to push for capital-intensive water transfer projects from South to North, or to emphasize recycling as well as conservation of water supplies in the North. This key allocation issue is further complicated by political considerations relating to the relative influence of provinces in the North and South.

We examine several different scenarios involving different combinations of water-transfer projects and recycling/conservation efforts intended to reduce the stringencies in water resource availability in the North. For various reasons, non-optimal policy decisions and resource allocations might be pursued. A plausible but adverse scenario would result in a reduction of China's annual GDP growth between 1.5 and 1.9 percent in the ensuing decade.

Energy Consumption and Prices

One risk posed for China's sustained high growth is the availability of oil and natural gas supplies at what might be sharply increased world energy prices. Price changes constitute the main risk, rather than China's shift from being a net exporter of oil in the early 1990s to a situation in which nearly half of its oil and nearly a fifth of its natural gas consumption are derived from imports.

To analyze this potential adversity, we consider several scenarios in which there is a drastic contraction in global oil supplies by about 25 percent lasting for a decade between 2005 and 2015. The several scenarios consider a range of plausible demand elasticities, together with allowance for increased energy efficiency, resulting in a conservative estimate of increased global oil prices by as much as threefold.

The resulting *bottom-line* effect on China's annual growth rate resulting from a "moderately severe" scenario during the period from 2005 to 2015 would be an average diminution between 1.2 and 1.4 percent.

Fragility of the Financial System and State-Owned Enterprises

One salient indicator of the fragility of China's state-dominated financial institutions is the extraordinarily high rate of non-performing loans (NPLs)

on the balance sheets of the four major state banks. NPLs have risen and continue to rise as a result of accumulated "policy lending" from the state banks to loss-incurring state-owned enterprises (SOEs). Estimates of total NPLs cover an enormous range between 9 and 60 percent of China's GDP: the correct figure is more likely to be at the upper end of this range.

Under various plausible circumstances, China could experience a panic "run" of withdrawals from the state banks, large scale capital flight, a significant reduction in savings, and a sharp decline in capital formation. The ensuing financial crisis and credit squeeze could plausibly reduce total factor productivity by 0.3 percent, with an accompanying reduction in the annual rates of growth of capital stock and of employment that would collectively lower annual GDP growth by 0.5 to 1 percent.

Possible Shrinkage of Foreign Direct Investment

Between 1985 and 2001, foreign direct investment (FDI) in China rose from an annual amount of about $2 billion to over $40 billion in 2001, in constant 1995 dollars. Analysts both within and outside China agree that FDI has been of considerable importance and has had leveraging effects for China's high rates of real economic growth, although there is considerable disagreement about the mechanisms that account for these leveraging effects.

High rates of FDI may well continue in the future, but there are also plausible circumstances under which FDI might severely contract. These adverse circumstances include both possible *internal* developments (such as tensions accompanying the leadership succession, the possibility of internal financial crisis, inconvertibility of the renminbi, and slow implementation of China's WTO pledges) and possible *external* developments (such as improvements in the economic infrastructure and investment climate in other competing countries and regions in Eastern Europe, Russia, India, and elsewhere). To a greater extent than in the past, future FDI in China will depend critically on the comparative risk-adjusted-after-tax-return on investment in China compared with that of other countries.

Based on very rough assumptions and using three plausible but admittedly imprecise methods, our preliminary calculations suggest that a sustained reduction of $10 billion a year in FDI may be associated with an expected reduction of China's annual GDP growth between 0.6 and 1.6 percent.

Conflictual Adversities: Taiwan and Other Potential Conflicts

The status quo in the perennial troubled relationship between China and Taiwan entails major benefits for the People's Republic of China (PRC), Taiwan, and the United States. However, there are also significant risks and tensions associated with the status quo. It is not inconceivable that these tensions might erupt into possible conflict between the PRC and Taiwan.

We consider one scenario involving escalation from what Beijing might view as provocation by Taiwan, a blockade imposed by the PRC in response, tangible though limited coercive force to effectuate the blockade, and the resulting effects on China's stock markets, exchange rates, and reallocations of resources to military spending, with ensuing reductions in the rate of growth of the civil capital stock and in total factor productivity.

The bottom-line of these adverse developments would be a decline in China's annual rate of economic growth conservatively estimated at between 1 and 1.3 percent.

In brief, Table 1 summarizes our rough estimates of the potential impacts on China's annual real economic growth that could ensue from each of the several adversities or fault lines, were they to occur separately on a one-at-a-time basis. Table 2 suggests some of the key interdependencies among the several fault lines we have discussed.

The probability that none of these individual setbacks will occur is low, while the probability that all will occur is still lower. Were all of them to occur, our estimates indicate that China's growth would be reduced between 8 and 10.6 percent annually, thus registering negative numbers for China's economic performance as a whole. While the probability that all will occur is very low, the probability that none will occur is also low, and the probability that several will ensue is higher than their joint probabilities would normally imply. The reason is that their individual probabilities are not independent of one

another; the occurrence of one or two will raise the probability that others will ensue. Because of these interdependencies, it is highly likely that several of the separate adversities would tend to cluster if any one of them occurs. For example, an internal financial crisis would have serious negative impacts on the relative attractiveness of foreign investment in China, conducing to shrinkage of FDI; epidemic disease would intensify water pollution problems and would discourage foreign investment.

Table 1: Effects on China's growth of separate adversities, 2005-2015

Types of adversity	Separate effects on China's economic performance (%/year)
Unemployment, poverty & social unrest	0.3 - 0.8
Economic effects of corruption	0.5
HIV-AIDS & epidemic disease	1.8 - 2.2
Water resources & pollution	1.5 - 1.9
Energy consumption & prices	1.2 - 1.4
China's fragile financial system & SOEs	0.5 - 1.0
Possible shrinkage of FDI	0.6 - 1.6
Potential military conflicts	1.0 - 1.3

Table 2: Interdependencies among adversities

Cause / Consequence	Unemployment, poverty & social unrest	Corruption	HIV-AIDS & epidemic disease	Water resources & pollution	Energy consumption & prices	China's fragile financial system & SOEs	Possible shrinkage of FDI	Potential military conflicts
Unemployment, poverty & social unrest		X	X	X	X	X	X	
Corruption	X					X	X	
HIV-AIDS & epidemic disease	X			X	X			
Water resources & pollution	X		X					
Energy consumption & prices								X
China's fragile financial system & possibility of internal financial crisis		X			X		X	X
Possible shrinkage of FDI		X	X			X		X
Potential military conflicts								

Note: Xs indicate where each fault line (column headings) is likely to affect the occurrence and/or severity of others (row headings).

Can China's Economy Resume Sustained High-Speed Growth?

THOMAS G. RAWSKI

Since the late 1970s, China's economic growth has astonished the world. Every imaginable indicator of material well-being—income, wealth, productivity, employment, longevity, consumption, and even the height and weight of China's citizenry—has risen steeply. The immensity of China's economic gains is beyond dispute. Furthermore, there is broad agreement among specialists that, despite specific areas of weakness, official Chinese statistics provide a generally accurate measure of national economic achievement during the first two decades of reform, that is, from 1978 to 1997.

Circumstances changed dramatically in 1998, when China's growth slipped badly due to structural imbalances, as well as the Asian financial crisis that undercut the growth of both exports and foreign investment. Beginning in late 1998, official measures of gross domestic product (GDP) growth, reproduced in Table 1, drew sharp criticism from domestic and overseas commentators who argued that these figures were distorted by upward bias (*shuifen*). The trends in prices, employment, and energy consumption add substance to the critics' arguments, which draw further support from Chinese reports alleging widespread manipulation and falsification of statistics.[1] Survey data show, for example, that 45 percent of Shanghai informants reported constant or declining family economic circumstances from 1995 to 2000. These data clash sharply with official data claiming double-digit growth during the same period.[2] The language in Chinese policy discussions, including the frequent use of terms, such as "downturn" and "slowdown," indicates that many Chinese economists lack confidence in recent official figures which—assuming a 10 percent error margin—show that the rate of national economic growth has experienced no change since the beginning of 1998.

Although national economic growth probably fell far short of official claims between 1998 and 2001, especially in 1998 and 1999, the situation changed again in 2002. While official growth projections cluster at the top end of the 7-8 percent range, there is now considerable evidence of a substantial pickup in growth momentum, including a bulge in direct foreign investment—especially from Japan, a surge in annual steel production that apparently exceeded 180 million tons, accelerated growth of domestic private business, and a substantial boom surrounding the production of passenger cars. Despite continued signals associated with weak performance—notably falling prices, slow job growth, and slack domestic consumer demand—rapid growth in the range of 5 to 8 percent seems entirely plausible for 2002.

This does not mean that Chinese statistics have regained their pre-1998 reliability. One example can illustrate the difficulties surrounding recent data. Table 2 shows the share of inventory accumulation in China's gross capital formation. A deputy chief of Chinese National Bureau of Statistics [NBS] stated, "No China-made products fall short of supply," because, in the words of another Chinese analyst, "Chinese consumers are reluctant to spend."[3] It is therefore no surprise that inventory accumulation occupies large segments of capital formation in

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major provinces. Amazingly, the national figures show essentially zero inventory accumulation in 2000 and again in 2001. This clashes head-on with the provincial figures that suggest much higher inventory accumulation. Where do the national-level inventory data come from? How do they mesh with steady increases in reported levels of circulating funds? Is the apparent underestimate of inventory accumulation linked to exaggeration of consumption spending, for which official data claim near double-digit growth despite many reports of sluggish household demand? The lack of answers to these and similar queries fuels suspicion that China's statistical system, which, according to NBS Director Zhu Zhixin, "cannot effectively resist intervention" from the government, has suffered extensive politicization. [4]

Potential Sources of Renewed High-Speed Growth

The international factor has made a massive and unexpected contribution to China's huge economic gains of the past two decades. Small and hesitant reform initiatives of the Chinese government delivered explosive returns. This is obvious from many perspectives, most notably the sustained out-performance of Guangdong and other regions deeply involved with the international economy. The lesson seems clear: deepening involvement with the international economy can provide a potent stimulus to long-term growth.

WTO entry seems likely to increase these benefits. WTO brings obvious costs and risks, but these are for the most part unavoidable. While WTO may accelerate the demise of uneconomic firms and industries, limited fiscal resources have already eroded the scope for protecting the weak. The extra cost of restructuring arising from WTO entry may be small.

Opening China's economy to increasing foreign contact and penetration has delivered large fortuitous benefits in the past. China's initial open-door reforms came just as domestic circumstances were forcing Taiwan, Hong Kong and South Korea to abandon local production of labor-intensive export products, many of which found new homes in China's coastal regions. This may continue, as China's WTO entry now allows the same regions to benefit from a new wave of factory migration, this time from Japan, now involving a more sophisticated array of products than the toys and garments that dominated the first wave of exportation.

Despite these realities, I believe China's domestic economy and society have provided the main sources of growth for the country in the past and will continue to do so in the future. The main reason for this is simply the size of the country, which makes a massive increase in foreign penetration unlikely. If China's economy grows rapidly, the foreign share will increase slowly even if the absolute size of foreign contributions increases. If the Chinese economy slows down, foreign investment will hold fewer attractions for international business, so that, again, the foreign share will not advance rapidly. Furthermore, the most likely areas for large-scale expansion of foreign participation or foreign links—for example portfolio investment and dispersion of export production to interior regions—clearly hinge on the progress of domestic reforms, adding yet further justification for focusing on domestic issues.

The domestic scene displays ample potential for further growth. In general terms, China benefits from a well-educated work force that has a long history of energetic response to economic opportunity. Today, as in the past, entrepreneurship figures prominently in Chinese society. High household-savings assure an abundant supply of capital. Governments at all levels assign the highest priority to achieving and maintaining rapid economic growth. Recent experience shows that China's leaders are willing to abandon tradition in pursuit of new growth opportunities, and to "bite the bullet" by embracing unpopolar but essential reforms. China's government is currently implementing a broad array of market-directed reforms, which, if pressed to their logical conclusion, could open the door to completing the transition to some type of market system.

Turning from general to specific conditions, we can see a number of potential growth poles that could re-energize high-speed growth. These include expansion of private business, development of a domestic product cycle, introduction of new technologies, expanded foreign investment, emergence of auto manufacture as a leading sector, construction and renovation of private housing, and domestic travel and tourism. Most of these possibilities have

attracted wide discussion. I comment only on the first two.

Private business. Private business has grown rapidly, in part because of an improved policy environment, including favorable legislation, a supportive constitutional amendment, and, most recently, the admission of private entrepreneurs into the Communist Party. Despite these beneficial policies, further expansion of private business, and therefore of employment, remains massively restricted by artificial barriers. One Chinese commentator provides an apt summary by noting that private firms "need national treatment." According to this commentator, although "governments at all levels have attached great importance" to the development of private firms in their public statements, in practice such firms "still felt the inequality in government treatment when compared with the state-owned and foreign-invested enterprises."[5] During 2000, for example, private businesses "accounted for about 30 percent of the value of China's total industrial output" as well as substantial shares of activity in commerce, construction, and transport, but "received less than one percent of total credit issued by banks."[6] Persistent restrictions on the scope, financing, and legal protection of private business demonstrate the survival of deep-seated hostility to private business. Examination of policy and outcomes in the area of private business leaves an impression of massive foregone opportunities, particularly at the national level.

Domestic product cycle. China has benefited from participation in the international product cycle in which labor-intensive manufactures migrate from place to place in search for low-cost labor and hospitable operating environments. China's steep domestic wage gradient creates the possibility of extending the domestic life-time of these export sectors by orchestrating the gradual westward movement of low-skill, labor-intensive export trades as rising wages and land costs erode their profitability in eastern coastal zones. This strategy, which could achieve large-scale job creation while simultaneously addressing important objectives of reducing regional disparity and social inequality, requires extensive development of both hardware and software. Rapid progress is much in evidence on the hardware side, with vigorous expansion of road, air, and telecommunication networks cumulating into impressive reduction in both transit time and in the cost of moving goods and information. The software dimension seems more problematic. Can local governments and economic entities in interior regions offer packages of accessibility, costs, talent, resources, public administration, taxation, and operating conditions that are sufficiently compelling to persuade would-be manufacturers of labor-intensive exports formerly concentrated in places like Shenzhen to relocate to inland China rather than Bangladesh, Vietnam, or Africa? Now that China has accumulated vast experience in coastal areas, ambitious local governments in central and western regions can employ experienced personnel from coastal regions to create and supervise systems that aim to attract overseas investment.

Obstacles to Renewed High-Speed Growth

Economics is a new subject in China. The entire professional lifetime of most Chinese economists has coincided with years of astonishing growth. China's long expansion looms as a natural phenomenon that requires little explanation. But recent Japanese experience warns against assuming that the future will replicate the past. The rapid obsolescence of books proclaiming Japan's economic ascendancy illustrates the twin dangers of overconfidence and linear predictions. The lesson is particularly worthwhile because of many similarities between Japan's economy and China's: large-scale investment with little attention to profitability; ample finance from bankers focused on scale and market share rather than risk and repayment; institutional structures that appear healthy while the economy expands but reveal huge gaps once the economy slows. Indeed, many Chinese leaders seek to extend Japanese-style policies (promoting large enterprises, channeling resources to support government-backed sectors), even though the costs associated with such policies (excess capacity, unrepayable loans) have already become very high.

In this atmosphere of massive achievements and high expectations, Chinese forecasts shy away from probing constraints or negative elements, and project an aura of optimism. In addition, Chinese policy analysis often builds on mechanical correlations: China's urban population share lags behind compa-

rable U.S. figures, therefore China should accelerate urbanization to promote higher growth.

In reality, China's development faces many obstacles. Most are familiar and widely discussed: rising levels of formal and implicit government debt, a shaky financial system, inadequate legislation and enforcement of economic law, environmental degradation, scarcity of water, oversupply of labor, the spread of AIDS and drug addiction, and corruption.

However we cannot judge national economic prospects by simply making lists of costs or obstacles. Dynamic economies can achieve remarkable growth without resolving glaring deficiencies. In describing China's rural industries, Joseph Stiglitz remarked that the traditional economic theory "would suggest that this system is a recipe for economic failure. Yet the success is palpable."[7] Furthermore, we observe that deficiencies are rarely "resolved." Rather they are ameliorated, often because substitutes are found that allow economies to slip past seemingly treacherous obstacles.

Therefore, to discuss obstacles to future growth, we must focus specifically on areas that have the capability of producing large and costly drains on growth momentum. The following discussion focuses on a key issue that could not only weigh down forward motion, but conceivably has the potential to stall the growth process. Specifically, I see bad investment decisions and poor management of existing fixed assets, particularly in the state sector, as the biggest weakness of China's economy. The legacy of bad investment decisions dates back to the 1950s. This is an area in which we see little change: Plan-era patterns persist despite decades of reform.

In his 2001 Government Work Report, Premier Zhu Rongji stated that "We need to formulate and implement plans for the reform of the investment and fund-raising systems as quickly as possible."[8] Numerous Chinese accounts confirm this forthright statement, which implies that 25 years of reform have scarcely begun to address major issues in these areas.

Macroeconomic costs associated with the unreformed investment system are readily visible. Many industrial facilities stand idle.[9] Official data indicate astonishing seasonal fluctuations in GDP and investment—far greater than comparable variations in neighboring East Asian economies (Table 3). Chinese nominal GDP typically plunges by more than 25 percent in the first quarter and leaps by about 20 percent in the final three months of each year. This pattern of behavior, familiar to students of planned economies, is not present in market systems. Construction projects experience long delays: the ratio of sales to completions and of sales to work in process is low (Table 4). Profits in the state sector "continue to slide downward, and the rate of return on gross and net assets is falling toward zero."[10] The banking system remains dangerously unstable, with extreme levels of bad loans.

Poor investment decisions and weak asset management also arise from difficulties at the micro-level. Government policy raises wages and reduces capital costs, encouraging capital intensive technologies that restrict employment growth. The consequences are particularly unfortunate since China's leaders recognize that "supply surpassing demand in the labor force is going to be a long-term phenomenon during the country's modernization process."[11] Government offices at all levels involve themselves in investment decisions, which are often shaped by administrative and political rather than economic and commercial concerns. The slogan "separate government from enterprises" (*zhengqi fenkai*) is widely ignored. Efforts to "re-regulate" the enterprise sector—such as the creation of a new regulatory system headed by the "Enterprise Division" (*qiyesi*) within the Ministry of Finance—acts as a brake on reform efforts, particularly in the state-enterprise and shareholding sectors.

Following official instructions, organized financial markets direct capital flows almost exclusively to state firms and state-related entities. In Jiangsu, which probably offers greater support to small firms than many provinces, "45.3 percent of the increased credit was given to 130 large enterprises in 2000 while 38,418 smaller enterprises suffered a decrease."[12] The inability of state-related firms to effectively compensate personnel with unusual skills or special contributions encourages ambitious and talented workers to resign. The result is a growing mismatch between the allocation of capital (clustering in and around the state sector, see Table 5) and highly skilled labor (moving away from the state and state-related sectors) that may exert major downward pressure on investment returns.

Bad management and weak enterprise governance compound these difficulties. Firms often plunge into investments without systematic planning.[13] The front page of *People's Daily* (Renmin Ribao) ridicules corporate directors who "don't know what they're doing!" (*qiye dongshi budongshi*).[14]

Reforming China's investment and asset management systems will not be easy. There are two possibilities. One is a large-scale, rapid shift of resources out of the state sector. Such a reform would accelerate privatization, reduce the importance of China's big four state-owned banks, and slash investment spending by state enterprises and state-controlled corporations. I see no support for such radical reform within China's policy community. Many leaders see massive investment controlled by and directed toward the state sector as essential to preserving economic stability and strengthening China's global competitiveness. Drastic reform would create a short-term reduction in aggregate investment—undercutting China's current macroeconomic policy stance. In addition, diverting substantial investment resources away from the big banks and state-controlled firms would quickly stumble upon the limited absorptive capacity of potential investment outlets outside the state sector.

The second approach would involve sweeping reform of the main channels of China's traditional investment system. This too seems unlikely. China's investment system has successfully resisted serious and determined reform efforts for over two decades. I find it difficult to disagree with growing numbers of Chinese economists who see China's state sector as essentially impervious to fundamental reform.

Conclusion

Substantial reform of China's investment system seems unlikely in the near term. I expect a continuation of familiar outcomes, in which large blocks of assets, including large segments of new investment, produce nothing of value. We will see more vacant buildings, idle factories, and unrepayable loans. Since investment is large, this means a substantial fraction of China's GDP is discarded, and substantial components of the annual flow of new fixed assets as well as the overall asset stock make no contribution to growth, innovation, productivity increase, or employment creation. This large and expanding stock of non-contributing assets means attainment of any specific growth target will require ever-larger returns from the limited supply of contributing assets.

China's near-term economic outlook includes a substantial array of favorable elements. The apparent return of strong growth in 2002 confirms their potential. Even so, I remain concerned that continued diversion of vast investment resources into projects that produce no useful economic contribution will effectively restrict the economy to the current path of low growth, stagnant employment, widespread overcapacity, low expectations, mild deflation, and low investment demand (in the absence of government pump-priming) that we have seen during 1998-2001.

In my view, institutional reforms that open the door to addressing long-standing structural issues, most notably in the area of investment behavior and asset management, will serve as the most important determinant of whether China's economy can escape from the low-growth pattern that prevailed from 1998 to 2001.

Institutional change is normally difficult to measure. In China's case, it is possible to suggest concrete indicators that can help to meter the course of restructuring in the investment system. Progress in reforming the investment system will sharply curtail the seasonal gyrations of investment spending, which are no different today than under the pre-1978 planned economy. This in turn will dampen the massive seasonal fluctuation of GDP. The share of annual investment spending in the first quarter was 11.5 percent in 1975, 8.6 percent in 1985, and 9.2 percent in 2001. The share of annual spending concentrated in the fourth quarter was 41.8 percent in 1975, 44.9 percent in 1985, and 42.8 percent in 2001.

Reform progress will also raise the *Shouxilü*—which measures the ratio of interest received by banks to interest owed to banks, and therefore provides a rough index of the bad loan ratio. Chinese sources place the *Shouxilü* at 84% for 1994, "less than 60 percent" for 1996 and 1998, and "less than 50 percent" for 1999, indicating that problematic loans occupied the majority of bank lending portfolios prior to the 2000 transfer of bad debts to newly created asset management companies. This progression shows that recently announced figures probably

understate the share of bad loans held by China's major banks, and that the quality of bank loan portfolios deteriorated steeply in 1998 and 1999, probably because official efforts to combat China's economic slowdown forced banks to forsake reform and issue large quantities of "soft" or "policy" loans that cannot be repaid. Effective reform will deliver a steep increase in the *shouxilü*, signaling a reduction in the share of bad loans in the banks' portfolios.

I see these seemingly obscure measures as key indicators of China's progress in reforming its investment system. My expectation is that improvement in these areas is likely to be slow. I therefore anticipate limited success in moving toward the objective of regaining the high-growth path on which China's economy operated during the first two decades of reform.

ENDNOTES

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Table 1: Main macro indicators of China's economy, 1998-2002 (%)

Year	Real GDP growth (official figure)	Real GDP growth (author's estimate)	Consumer price index (prior year = 100)
1998	7.8	-2 to +2	99.2
1999	7.1	-2.5 to +2	98.6
2000	8.0	+2 to +4	100.4
2001	7.3	+3 to +5	100.7
2002	8.0	+5 to +8	98.9

Sources: GDP growth data for 1998-2001 is from *China Statistical Yearbook 2002* (China Statistics Press), 53; for 2002 (preliminary figure) from http://english.peopledaily.com.cn/200212/30/eng20021230_109314.shtml. Consumer price index for 1998-2001 is from *China Statistical Yearbook 2002*, 295; for 2002 (December) from *China Monthly Economic Indicators*, No.1, 2003, 34 (average of figures for Beijing, Shanghai, Guangzhou, Wuhan, and Chongqing).

Table 2: Provincial and national share of inventory accumulation in gross capital formation (GCF), 1999-2001

	GCF (100 million yuan)	Inventory share as percentage of GCF		
	1999	1999	2000	2001
Beijing	1526.16	19.18	9.25	8.10
Tianjin	722.70	12.56	14.94	13.80
Hebei	2183.96	16.56	16.94	16.80
Shanxi	685.15	11.65	11.88	9.70
Neimeng	554.22	30.83	29.86	18.90
Liaoning	1284.31	13.12	12.07	11.20
Jilin	658.74	20.30	8.57	11.50
Heilongjiang	961.19	10.62	6.73	7.00
Shanghai	1929.42	6.63	8.73	8.50
Jiangsu	3554.26	20.02	20.77	18.80
Zhejiang	2519.98	21.80	15.20	8.50
Anhui	1049.96	20.06	15.24	14.60
Fujian	1673.94	29.22	29.99	32.00
Jiangxi	747.17	26.03	15.70	13.00
Shandong	3652.95	27.10	23.80	20.90
Henan	1964.61	25.05	23.49	22.40
Hubei	1811.66	27.13	25.64	18.00
Hunan	1130.67	15.44	15.13	13.60
Guangdong	3252.19	8.54	8.94	9.50
Guangxi	645.64	2.57	0.81	4.40
Hainan	223.83	16.05	18.39	18.60
Chongqing	592.58	5.67	8.28	7.20
Sichuan	1466.29	16.13	9.14	8.70
Guizhou	431.88	7.63	7.47	3.40
Yunnan	744.31	3.15	3.21	19.60
Tibet	43.75	15.47	15.93	15.50
Shaanxi	678.65	4.03	6.51	8.80
Gansu	411.47	31.02	23.46	18.10
Qinghai	140.29	6.54	2.17	2.50
Ningxia	142.39	8.27	4.04	5.70
Xinjiang	581.59	5.14	-9.72	6.70
Average for all provinces				
Unweighted		15.60	13.00	12.80
GCF weights		17.60	15.40	14.40
National figures	37460.80	4.00	-0.40	1.70

Note: Gross capital formation is the sum of gross fixed capital formation and inventory accumulation.

Sources: *China Statistical Yearbook 2000*, 68; *China Statistical Yearbook 2001*, 64; *China Statistical Yearbook 2002*, 63, 64, 66.

Table 3: International comparison of seasonal macroeconomic fluctuations among China, Taiwan, Hong Kong and South Korea (percentage changes from the previous quarter)

	Nominal GDP				Nominal fixed capital formation			
	China	Taiwan	Hong Kong	S. Korea	China	Taiwan	Hong Kong	S. Korea
1999-I	-33.2		-10.6	-10.6				
1999-II	16.2	-2.3	5.3	7.7				
1999-III	**5.2**	**5.8**	**4.4**	**5.2**				
1999-IV	23.1	3.6	3.6	12.8				
2000-I	-28.0	4.0	-6.7	-11.5	-55.5	-24.6	2.0	-9.7
2000-II	17.3	-3.4	1.4	4.5	137.2	15.8	-0.1	14.8
2000-III	6.2	5.1	5.7	3.2	11.9	4.1	9.4	-3.9
2000-IV	20.5	-3.5	1.8	8.6	81.6	11.1	-1.7	2.7
2001-I	-27.1	-0.9	-8.0	-10.5	-76.2	-31.8	-2.9	-13.3
2001-II	15.8	-9.5	0.9	5.7	148.7	12.1	-5.7	12.2
2001-III	5.4	0.6	4.2	0.8	**9.8**	**-15.6**	**10.2**	**-0.8**
2001-IV	18.5	2.7	1.7	8.7	70.3	15.3	-8.7	8.8
2002-I	-26.9	0.6	-9.0	-7.7	-72.6	-22.4	-13.3	-12.8

Note: **Boldface type** identifies quarters in which China did NOT show the largest quarter-to-quarter change (absolute value, percentage terms). The Chinese data refer to completed investment in fixed assets. The Taiwan and Hong Kong data measure gross domestic fixed capital formation. The Korean data represent gross fixed capital formation.

Sources:
For China: *Monthly Indicators*, No. 1, 2001, 14, 36; No. 2, 2002, 36; and No. 7, 2002, 10. *China Economic Quarterly* No. 3, 2000, 7 (for the 1999 IV figures).
For Taiwan: www.geoinvestor.com/countries/taiwan/main.htm and www.stat.gov.tw/bs5/enghtm/engquarter.htm, accessed on August 22, 2002.
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For South Korea: www.nso.gov.kr, accessed on August 31, 2002.

Table 4: Construction and sales of commercial buildings—Cumulative totals of floor space in process, completed, and sold (million square meters)

Year	Floor space in process	Completed	(%)	Sold	(%)
1998	486	154	31.7	107	22.0
1999	705	352	49.9	241	34.2
2000	987	582	59.0	411	41.6
2001	1354	855	63.1	619	45.7
2002 (by June)	1460	913	62.5	682	46.7

Note: Data begin in 1998. Figures shown here omit any previous backlog of unfinished projects. Work in process is the sum of previously completed floor space and construction projects currently underway. Calculations assume that no projects are abandoned.

Source*: Monthly Indicators*, No. 1, 2001, 38; No. 11, 2001, 34; No. 7, 2002, 38.

Table 5: Breakdown of assets in industry and commerce by ownership (absolute figures and composition), 1998-2000

	Asset stock			Increment to asset stock		
	1998	1999	2000	1998	1999	2000
Total	25,452 100.0%	26,800 100.0%	29,300 100.0%	1,348 100.0%	2,500 100.0%	3,848 100.0%
Public	**18,042 70.9%**	**18,894 70.5%**	**20,188 68.9%**	**852 63.2%**	**1,294 51.7%**	**2,146 55.8%**
State sector	13,467 52.9%	14,517 54.2%	15,998 54.6%	1,050 77.9%	1,481 59.2%	2,531 65.8%
Collective sector	4,575 18.0%	4,378 16.3%	4,190 14.3%	-197 -14.6%	-189 -7.5%	-386 -10.0%
Private	**7,410 29.1%**	**7,909 29.5%**	**9,112 31.1%**	**499 37.0%**	**1,203 48.1%**	**1,702 44.2%**
Domestic	3,604 14.2%	4,004 14.9%	4,805 16.4%	400 29.7%	801 32.0%	1,201 31.2%
Foreign-linked	3,806 15.0%	3,905 14.6%	4,307 14.7%	99 7.3%	402 16.1%	501 13.0%

Note: Absolute figures in billion yuan (renminbi).

Source: Shen Ying and Tao Ruizhi, "Analysis of the Structure of China's Social Assets in 2000," *Guoyou Zichan Guanli* (State Asset Management), No. 12, 2001, 4-8.

China's "Software Advantages"

DEBORAH S. DAVIS

Winners and Losers in Contemporary China

Twenty years ago, 80 percent of the Chinese population survived on less than a dollar a day. Rural families saved for a year to buy a pair of rubber boots, and urban families needed ration coupons to purchase rice, cooking oil, sugar, and coal. Today, the World Bank ranks China as a lower-middle income country in terms of purchasing parities. Rationing has disappeared, and consumer goods that once were luxuries for the elite are now routine purchases (see Table 1). In 2001 more than half of rural families owned a color television, and China is now Motorola's number one market for cell phones. Millions of Chinese own private cars and university students routinely turn to the Internet for international news and stock prices.

But beyond these indicators of growth and affluence is a more complex story. Many economists, most notably Thomas Rawski, believe that the Chinese government has grossly inflated growth rates, and that there has been serious stagnation and unproductive investment.[1]

Others are more willing to presume robust growth rates but worry that rapidly increasing income inequality threatens long-term prosperity and stability. In particular, many expect that the widening gap between the comfortable life in coastal cities and the hardscrabble life of the rural majority will destabilize society and derail growth. Also problematic is the possibility that the material wealth of today will become so concentrated in the hands of those who previously monopolized political power that there will be no democratic dividend from increased prosperity.

To date, there are no definitive answers to these concerns about China's long-term economic and political future. However, by examining the emerging pattern of winners and losers through the lens of long-term human capital development, I argue that in the short run, China's engine of growth will not come to a screeching halt. Instead, because of steadily improving human capital, Chinese society enjoys "software advantages" that can sustain growth and create greater prosperity over the next 5 to 10 years.

Less Poverty and More Income Inequality over the 1990s

Between 1978 and 2001, China experienced sustained, and substantial gains in per capita income and in the value of per capita consumption (see Figure 1 and Figure 2). Rural residents gained proportionately less than city dwellers, and over the decade of the nineties, the gap between urban and rural areas increased. However, rising standards of living and dramatic reduction of poverty were pronounced. During the first half of the 1990s per capita consumption in both urban and rural areas grew by 50 percent;[2] and per capita output of non-essential foods continue to rise. If poverty is defined at one dollar a day, the percentage of the rural population living in poverty fell from 43 percent in 1990 to 24 percent in 1997.[3]

However, declining rates of extreme poverty also coincided with a rapid increase in income inequality. Specifically between 1988 and 1995 China expe-

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rienced the most rapid increase in income inequality tracked by the World Bank, with an especially rapid increase across the rural-urban divide. In 1990 per capita urban incomes were 2.2 times as high as that of rural households; the ratio rose to 2.65 by 1999 and to 2.8 by 2000.[4] Moreover, if one factors in the value of the subsidies that urban residents received for housing, medicine, and education, and adjust for the higher tax burden of rural residents, average urban incomes are more than four times as high as average rural incomes.

Comparing the distribution of average household incomes among different deciles of the population, tells an even more precise story of increasing inequality over the decade of the 1990s. (see Figure 3). If one uses the calculations of Azizur Khan and Carl Riskin, the national gini coefficient went from .382 to .452 between 1988 and 1995.[5] And if one relies on the Chinese State Statistical Bureau, it increased from .424 in 1996 to .458 in 2000. Regardless of the metric, China's income distribution is now comparable to that of the Philippines (0.462), although significantly more equal than that of Brazil (0.591).[6]

The primary explanations for increased income inequality are limited opportunity for wage jobs outside of agriculture in rural areas and an urban employment system that offers little wage growth to unskilled labor but pays a premium for those with high tech skills for which there is increasing global competition.[7] Were I now to review the considerable scholarly literature on determinants of income inequality, we could plunge into a dense thicket of competing regression models that predict which individual or household characteristics identify winners and losers in the newly competitive, and increasingly globalized labor markets of urban and rural China.

Most recently the debate has focused on specifying the financial rewards for membership in the Communist Party, college education, or employment as a government official. Or in the language of sociology, we are debating the net returns of political and human capitals. To illustrate the basic consensus that currently holds, I review a study by Duke University sociologist Xueguang Zhou that draws on a survey of 5,000 individuals living in 20 cities in six provinces.[8]

The reason I emphasize Zhou's work is that he elegantly identifies not only the key demographic characteristics that predict higher incomes but also permits us to compare the "equation for urban success" from 1960 through 1993. Let me now identify the four most central predictors of higher income:

1. Being male (controlling for all else) provides the number one advantage, and across the post-Mao years (1979-1993) the penalty for being female remains constant. We have no comparable studies that go through to 2000, but for the ones that go through 1996 with comparable urban samples, the results are similar: all else being equal, being male adds 22 percent to earnings.[9]

2. Having more education also consistently raises incomes, and this advantage grows as marketization intensifies.

3. Being a high-ranking official has always paid off, and while the "pay-off" was lower in 1993 than it was in 1960, it was not lower in 1993 than in 1965, 1987, or 1990. Moreover the "return" in 1993 to political power was higher than to advanced education or professional employment.

4. And finally, by the early 1990s working in a private or hybrid firm (private-public ownership) was key to having higher income (or conversely the penalty for working in the collective sector intensified over the course of the reforms between 1984 and 1993). And again, in subsequent analysis that uses data from 1995 and 1996, we see the same pattern.[10]

In short, the biggest winners in China's more marketized economy of the 1990s were a minority of men with tertiary education who worked in managerial positions in large coastal cities, and the losers were farmers and manual workers in urban and rural enterprises.

But how does the dual finding of increasing inequality and significant declines in grinding poverty speak to the question about the near future of the Chinese economy? And in particular, given the underlying causes of both poverty and income inequality: will the bubble burst? Will the increasing income gap and high returns to both political position and advanced education create a backlash that will drastically reduce past rates of economic growth?

Will the Bubble Burst?

As I weigh the multiple societal trends that might predict the character of Chinese society over the next five years, I see more positives than negatives. Thus even against the somber picture of increasing income inequality as well as a weakening pension and health care system, I remain impressed by China's "human software." And in particular, I draw your attention to three long-term trends that support rising standards of living and increasing productivity.

Dependency Ratio. Demographically China has an unprecedented advantage in its low dependency ratio: Between 1990 and 2000, the percent of the population under age 15 and older than 64 slightly declined (see Table 2). Over the next five years, the overall dependency ratio will remain within this same range. Moreover, even as the growing number of elderly may create heavier demands on medical services, the falling percentage of young children suggests that both local governments and families will likely maintain or even increase their investment in primary and secondary education. Given the excellent core curriculum across the entire country, China is therefore well positioned to continue to upgrade its "human capital" over the next decade.

Education. In terms of educational achievement, China also looks very strong, both in comparison to its own experience during the early 1980s, and in comparison to countries with large agrarian populations in Latin America, Africa, and South Asia. I highlight three metrics that are of particular importance: falling illiteracy, rising rates of secondary school attendance, and greater access to post-secondary education. Moreover, none of these trends was seriously impacted by the 1997-1999 economic downturn.[11]

First, the rate of illiteracy dropped significantly during the second half of the 1990s, falling by 17 percent among men (from 10.7 percent in 1995 to 8.8 percent in 1999) and 13 percent among women (from 28.1 percent in 1995 to 24.5 percent in 1999).

Second, a higher percentage of teenagers are attending school, and a higher percentage of junior high school students graduate. In 1986 the central government legislated free, mandatory education through grade nine, and over the decade of the 1990s, China came close to realizing this goal. By 1998 it is estimated that 85 percent of teenagers aged 12 to 14 was enrolled in junior high, and 80 percent of those who entered, graduated. Moreover, drop out rates for primary school fell to 1 percent and for junior high to 3.7 percent.

Third, in 1990 about 3.4 percent of those aged 18 to 22 were attending post-secondary schools; by 2000 the percentage reached 11.5, and the government's target is 15 percent by 2004.[12] Based on recent surveys of parents, students, and university educators the 15 percent target seems realistic.

Health Status. In the past year, largely as a result of the work by scholars such as Bates Gill, the world has been made aware of the economic costs of the AIDS crisis in China, and in particular of the probabilities of exponential growth as a result of contaminated blood supplies in central China. At Yale we have been deeply involved in responding to this spreading epidemic and most recently held a symposium that brought together both Yale faculty who have been active in training Chinese healthcare workers to care for AIDS patients and such global leaders as Wan Yanhai, head of one of China's few NGOs dedicated to fighting the spread of AIDS, and David Ho, creator of one of the most promising HIV vaccines.[13]

However, even when one factors in the long-term impact of HIV-AIDS, China's population on balance demonstrates many strengths. Over the 1990s, life expectancies increased to 68.7 years for men and to 73 for women. China still retains a national health system capable of effective coordination and mass education. Skilled professionals exist in virtually all county hospitals and a domestic pharmaceutical industry allows China to immunize more than 95 percent of children against the full range of childhood infectious diseases. Thus even in the shadow of AIDS, China's generally healthy population remains an economic asset.

Concluding Remarks

In this short essay I have identified a range of economic and societal challenges to China's potential for sustained economic growth. I also believe that growing inequality can be socially destabilizing, and that if the Chinese government does not mobilize the healthcare system to curb the spread of AIDS, the burden of disease will undermine economic

growth and divert scarce welfare funds from education and infrastructure investments.

However, when addressing the broadest trends in Chinese society, I stand on the side of the optimists and stress China's several core "software advantages:"

- Low birth rates across all regions of the nation
- A dependency ratio that favors investment in the young
- Sustained public funding for nine-year education
- Increasing enrollment in post-secondary education
- A healthy population of children and young adults
- Life expectancies and infant mortality rates of a middle-income country

In short, because the human software of China is generally reliable and continues to improve, core fundamentals for economic growth remain strong. Consequently, it is unlikely that in the immediate future the economy as a whole will experience contraction and decline.

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13 Copies of these papers will be available after July 1 in *Yale-China Health Journal*, summer 2003, available at http://www.yalechina.org.

Table 1: Ownership of consumer durables per 100 households

	Rural		Urban	
	1985	2001	1985	2001
Electric fans	10	117	74	170
Color TV	12	54	17	120
Washing machines	2	29	48	92
Refrigerators	>1	13	7	82
Camera	1	3	8	39
Personal computer	0	N/A	0	13

Note: Numbers higher than 100 indicate that some families have more than one such item in their homes. In 2001 there were 340 million households of which approximately 100 million lived in cities.

Source: *China Statistical Yearbook 2002*, 350.

Table 2: Age distribution as percentage of the Chinese population

Population by age group	1953	1964	1982	1990	2000
0-14	36.28	40.69	33.59	27.69	22.89
15-64	59.31	55.75	61.50	66.74	70.15
Over 65	4.41	3.56	4.91	5.57	6.96

Source: *China Statistical Yearbook 2002*, 95.

Figure 1: Urban per capita annual gains or losses (percentage changes)

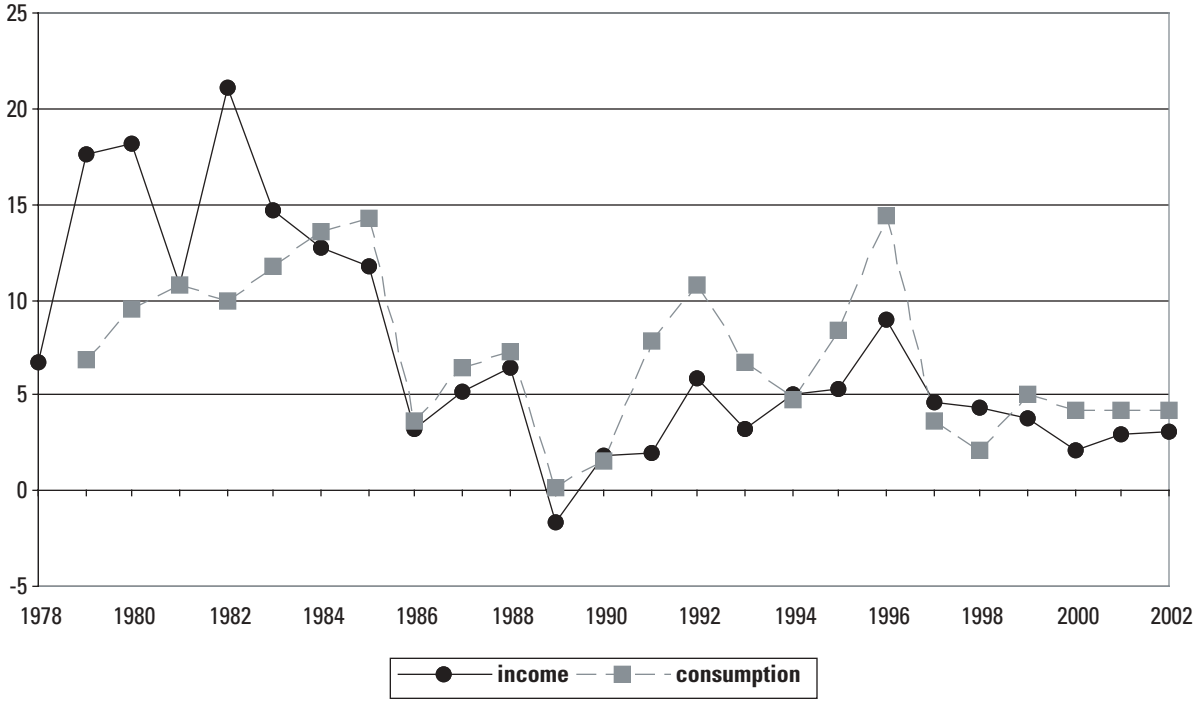


Figure 2: Rural per capita annual gains or losses (percentage changes)

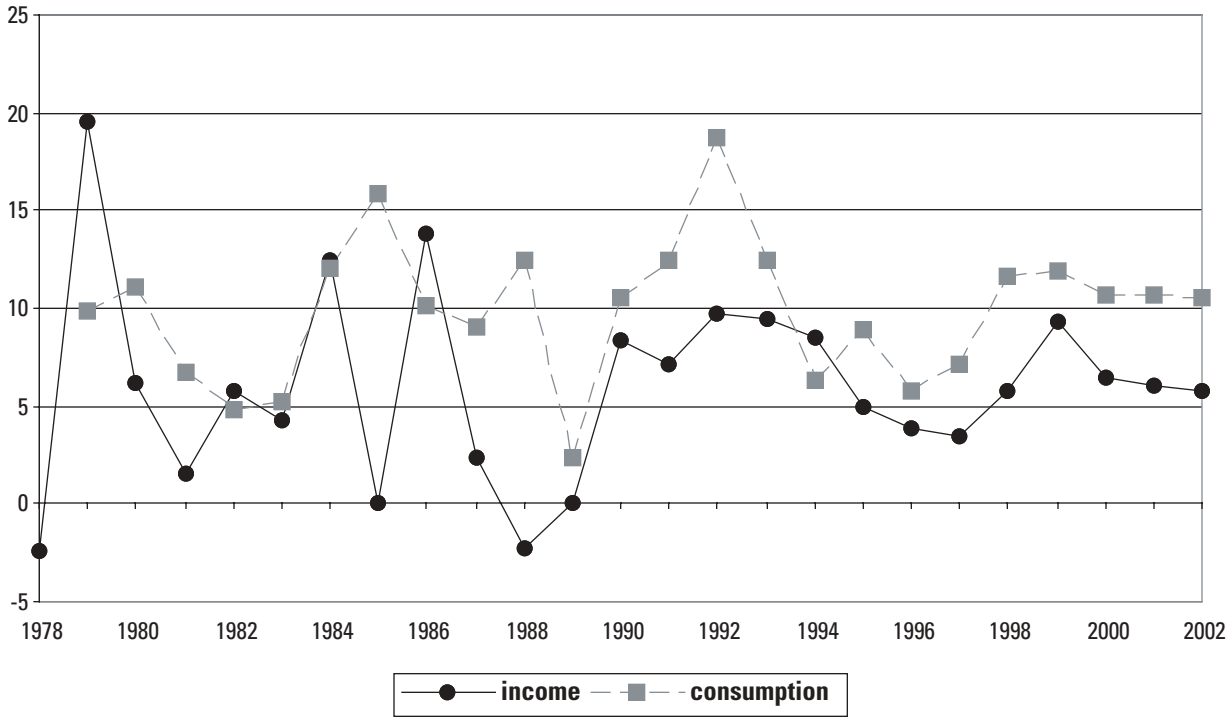
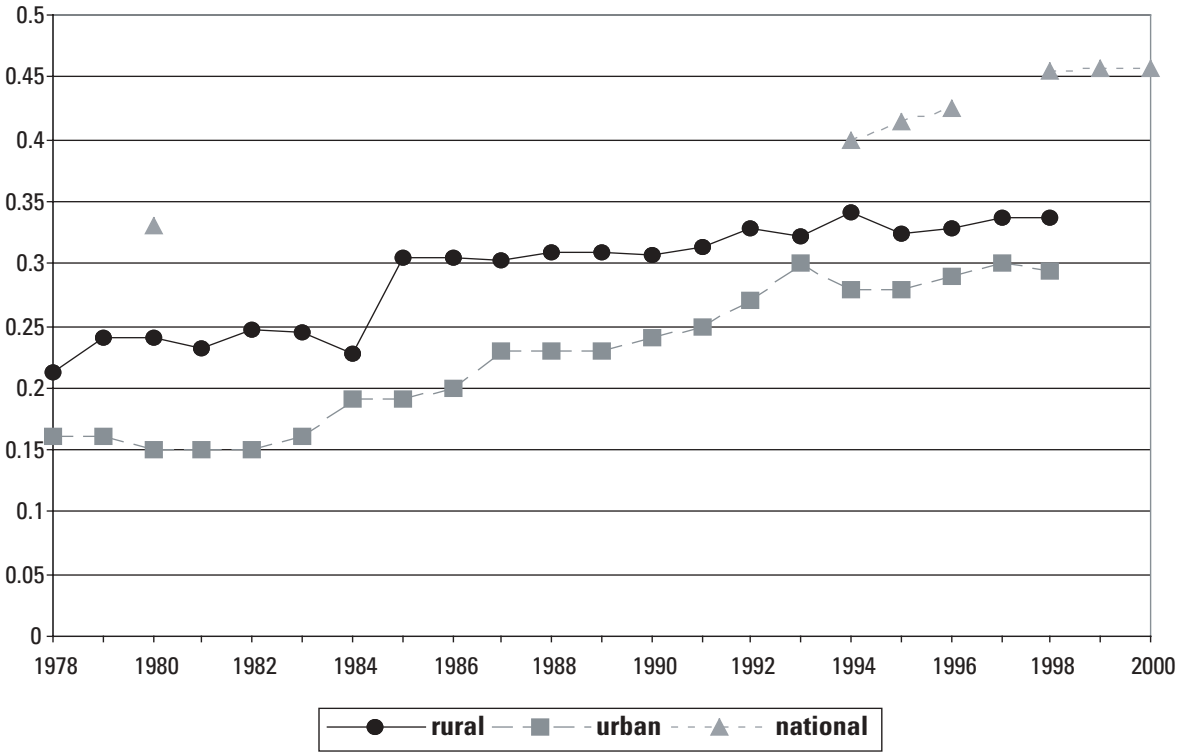


Figure 3: Per capita household income inequality: gini coefficients



Note: Complete national figures are unavailable.

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