Fault Lines in China's Economic Terrain

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former Assistant Secretary of State for East Asian and Pacific Affairs

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PREFACE

The focus of this research is the potential adversities or fault lines (the terms are used synonymously) facing China's economy and affecting its prospects for sustaining high growth through the coming decade. 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.

This book is the product of a project jointly sponsored by the Office of Net Assessment in the Department of Defense and the Smith Richardson Foundation. Their sponsorship was based on a mutual understanding that their joint support would enable the work to be expanded beyond what would have been possible if funding were confined to one sponsor alone.

The project was implemented through RAND's National Defense Research Institute (NDRI), a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the unified commands, and the defense agencies.

The book should be of interest and use to those in the policy community and the academic community concerned with China and with the economic and security environment in the Asia-Pacific region.

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SUMMARY

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?[1] How severely will China's overall economic performance be affected if these adversities occur separately or in clusters? This book addresses these key questions. 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, summarized below. 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.

[1]In a few instances (for example, Chapter Four deals with epidemic disease, and Chapter Five deals with water resources), the consequences of adverse scenarios are evaluated through 2025.

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 23 percent of the total labor force, or approximately 170 million. 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.

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. Were corrupt practices in China 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. To analyze the effects of possible further disease spread, several scenarios are simulated, which include varying estimates of the costs of therapy, the effects of disease on factor productivity, and the effects on per-capita output. The bottom-line estimate for the "intermediate" rather than "pessimistic" scenarios is a trajectory of annual deaths from HIV/AIDS in China between 1.7 and 2.7 million 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 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 policymakers 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, or to pursue a combination of these alternatives. 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, nonoptimal policy decisions and resource allocations might be pursued. A plausible but adverse scenario would result in a reduction in 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 rate 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 (2005–2015). 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 stemming from a "moderately severe" scenario during the period 2005–2015 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 nonperforming 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. Estimates of total NPLs cover an enormous range, between 9 percent 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 1.0 percent.

POSSIBLE SHRINKAGE OF FOREIGN DIRECT INVESTMENT

Between 1985 and 2001, foreign direct investment (FDI) in China rose from an annual rate 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 not implausible circumstances under which this 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), as well as 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 in China's annual GDP growth between 0.6 and 1.6 percent.

TAIWAN AND OTHER POTENTIAL CONFLICTS

The status quo in the perennially 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 1.0–1.3 percent.

Table S.1 summarizes our rough estimates of the potential effects 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.[2]

Table S.1

Impacts on China's Growth Arising from Separate Fault Lines, 2005–2015 (Preliminary)

Type of Setback	Separate Effects Diminishing China's Economic Performance (percentage/year)
Unemployment, poverty, social unrest	0.3–0.8
Economic effects of corruption	0.5
HIV/AIDS and epidemic disease	1.8–2.2
Water resources and pollution	1.5–1.9
Energy consumption and prices	1.2–1.4
Fragility of the financial system and state-owned enterprises	0.5–1.0
Possible shrinkage of foreign direct investment	0.6–1.6
Taiwan and other potential conflicts	1.0–1.3

[2]These results beg the question of how long each of these adverse effects would endure without inducing remedial efforts or, failing to induce them, having "contagion" effects on the other adversities.

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 7.4 and 10.7 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 several will ensue is higher than their joint probabilities would normally imply. The reason for this multiplication of effect 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. As examples: an internal financial crisis would have serious negative consequences for 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 S.2 suggests some of the key interdependencies among the several fault lines we have discussed.

Table S.2

Interdependencies Among Fault Lines

Consequence \ Cause	Unemployment, poverty, and social unrest	Economic effects of corruption	HIV/AIDS and epidemic disease	Water resources and pollution	Energy consumption and prices	Fragility of the financial system and state-owned enterprises	Possible shrinkage of foreign direct investment	Taiwan and other potential conflicts
Unemployment, poverty, and social unrest		✔	✔	✔	✔	✔		
Economic effects of corruption	✔					✔	✔	
HIV/AIDS and epidemic disease	✔			✔	✔			
Water resources and pollution	✔		✔		✔			
Energy consumption and prices	✔							
Fragility of the financial system and state-owned enterprises	✔	✔	✔				✔	✔
Possible shrinkage of foreign direct investment	✔	✔	✔			✔		✔
Taiwan and other potential conflicts								

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NOTE: ✔ indicates where a fault line (cause/column heading) is likely to affect the occurrence and/or severity of another (consequence/row heading).

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ACRONYMS AND ABBREVIATIONS

ABC	Agricultural Bank of China
AFP	American Foreign Press
AWSJ	*Asian Wall Street Journal*
BOC	Bank of China
Btu	British thermal unit
CAS	Chinese Academy of Sciences
CASS	Chinese Academy of Social Sciences
CBC	Construction Bank of China
CCP	Chinese Communist Party
CD	*China Daily,* Beijing
CDC	U.S. Centers for Disease Control and Prevention
CDN	*Chinese Daily News,* Los Angeles
CITIC	China International Trust and Investment Corporation
CLA	China Labor Association
COD	chemical oxygen demand
DALY	disability adjusted life year
DRC	Development Research Center, State Council
EIA	Energy Information Administration

FBIS	Foreign Broadcast Information Service
FDI	foreign direct investment
GDP	gross domestic product
ha	hectare
HAART	Highly Active Anti-Retroviral Therapy
ICBC	Industrial and Commercial Bank of China
IMF	International Monetary Fund
ITC	investment and trust company
IV	intravenous
l/c/d	liters per capita per day
MOL	Ministry of Labor
MOLS	Ministry of Labor and Social Security
NPL	nonperforming loan
OECD	Organisation for Economic Co-operation and Development
PBC	People's Bank of China
PPP	purchasing power parity
PRC	People's Republic of China
RMB	renminbi (People's currency, used synonymously with "yuan," which is the traditional designation of China's currency)
SA	*Statistical Abstract*
SCMP	*South China Morning Post*, Hong Kong
SLOCs	sea lines of communications
SOE	state-owned enterprise
SSB	State Statistical Bureau
SY	*Statistical Yearbook*
TFP	total factor productivity

TKP	*Ta kung pao*, Hong Kong
UNAIDS	Joint United Nations Programme on HIV/AIDS
WDR	World Bank, *World Development Report*
WHO	World Health Organization
WHP	*Wen hui pao*, Hong Kong
WRI	World Resource Institute
WSJ	*The Wall Street Journal*
WTO	World Trade Organization