China and Globalization

David Blair

How Nations Succeed

The China Case Study

CCG 全球化智库
CENTER FOR CHINA & GLOBALIZATION

Springer

China and Globalization

This series is designed to have a wide range of global views on issues related to China and Globalization, opportunities and challenges on China's rise to the world and China's roles in global governance, global economy, global development and global security. It outlines China's international relations with major global powers and the rest of the world and it contains recommendations and proposals for the future of sustainable development, prospects of China's further capital and market liberalization, and China's globalizing trajectories as experienced by the world.

The first of its kind to publish the works of over two hundred contributors internationally, this book series seeks to create a balanced global perspective by gathering the views of highly influential global opinion leaders, former statesmen, ambassadors, well known academics and think tank experts, multinational CEOs and foreign chambers of commerce from China and around the world.

David Blair

How Nations Succeed

The China Case Study

Springer

David Blair
Yuxi, Yunnan, China

ISSN 2730-9983 ISSN 2730-9991 (electronic)
China and Globalization
ISBN 978-981-92-2058-8 ISBN 978-981-92-2059-5 (eBook)
https://doi.org/10.1007/978-981-92-2059-5

This Springer imprint is published by the registered company Springer Nature Singapore Pte Ltd.
The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

To my wife, Ivy,
Sine Qua Non

Contents

Chapter 1
How China Increased the Quality of Life of Average People

Living Standards in China and the US

At the time of this writing, I have lived in China for almost 10 years, both in Beijing and in the small city of Yuxi (pronounced like the English words You-She) in the southwestern province of Yunnan. Having grown up in the United States, lived in many US states, plus 2 years in Germany, I was surprised to conclude that the quality-of-life standard in China is about equal to that in the United States or Germany. In many ways, working-class and some middle-class Chinese people now live better than their equivalents in the US.

No American visiting China in 1980, 1990, or 2000 would have proposed that the quality of life of the average person in China was preferable or even roughly equal to that in the United States. Even in 2010, that proposition would have been implausible to me, though it would have been worth consideration. In 2025, after observations of life in China, I do argue that the two countries now have fundamentally equivalent quality-of-life standards.

How could it be that the quality-of-life in China even comes close to that in the US? Using exchange-rate adjusted GDP, US per capita GDP in 2023 was $81,695 and China's GDP per capita was $12,614, according to the World Bank.[1] Even using purchasing power parity, which attempts to adjust for domestic prices within each country, the World Bank estimates the US purchasing power parity for 2023 at $81,695 per person and China's 2023 PPP at $24,558 per person, seeming to imply that Americans are more than three times better off than Chinese.[2] This implication is not consistent with my first-hand observations.

A person making, say, 7000 or even 3000 RMB per month (roughly 1000 or even 400 US dollars at 2025 exchange rates), can, in many areas of China, live quite a

[1] Reproduced at https://en.wikipedia.org/wiki/List_of_countries_by_GDP_(nominal)_per_capita.

[2] Reproduced at https://en.wikipedia.org/wiki/List_of_countries_by_GDP_(PPP)_per_capita.

D. Blair, *How Nations Succeed*, China and Globalization,
https://doi.org/10.1007/978-981-92-2059-5_1

good life. Anyone earning dollar-equivalent salaries in the US would be desperately poor. My rough observation is that a Chinese worker who earns 5000 RMB has an equivalent lifestyle quality to one who makes between 3000 and 4000 dollars per month in the US. Depending on family circumstances and location, this worker is not at all well-off and really does not achieve secure middle-class status but avoids poverty.

Thus, the "quality-of-life exchange rate" is 1.2 to 1.6 RMB per dollar, not the market exchange rate of about 7 RMB per dollar. As explained in Chap. 2 below, this does not in any way mean that China is somehow manipulating the exchange rate. The difference is mostly explained by the special role of the dollar as the international reserve currency. The value of the dollar is determined by international capital flows, not by international goods and services trade and certainly not by relative quality of life.

This estimate is based on my observations from living in both countries but could be further developed by detailed sociological studies of lifestyles in the two countries. My personal observation is backed up by a recent study by the China Finance 40 think tank[3] that mapped China's consumption basket into other countries' prices. It concluded that China's per capita consumption is approximately 80 percent of US levels, a far cry from the 15 percent implied by dollar exchange rate conversion or the 30 percent implied by PPP conversion.

PPP takes a US consumption bundle and asks how much it would cost to purchase that same bundle in China. CF40 took a Chinese consumption basket and asked how much it would cost to buy the same bundle in the US. This is a kind of reverse PPP calculation. PPP does not take into account that Chinese purchase quite different things than do Americans. Because domestic products in China can be quite cheap, Chinese people buy more of them. If some international organization would create a data set using the CF40 methodology, it would greatly help our understanding of relative living standards among countries.

Even the CF40 calculation does not take into account the fact that China has a wide array of public goods that are not available in the US. So, Chinese total consumption (public services and private) is even higher than 80 percent of the US level. Because of public transport, ubiquitous parks, and other public services, Chinese simply don't need to spend as much as Americans to have an equivalent quality of life. Thus, Chinese real consumption is even higher than measured by just private personal expenditures.

China has implemented three sets of policies that combine to improve dramatically the quality of life of average people. (1) **Median Real Wages** have grown so rapidly that worker real wages have multiplied 8.7x since 2000 and 23x since the start of reform and opening up in 1979. (2) **Highly Competitive Markets** have made products of all kinds cheaper while, at the same time, ensuring that average people, rather than a few monopolists, gain from economic and technological

[3] Fei Yu and Kai Guo, "The Value of China's Consumer Basket in the U.S., Japan, France, Germany, and Mexico," CF40 Research, September 23, 2025. https://www.cf40.com/report/english/2242.

changes. And (3) **Public Investments** have directly increased productivity while also making daily life more convenient, nicer and cheaper for average people.

The reason that many Americans believe that they are worse off than they were 20 or 50 years earlier is that none of these policies have been followed by the US government. Median real wages have not grown since the 1970s. Almost all sectors of the US economy have become more monopolized, thus driving up prices and sending most economic benefits to a small elite. And the quality of public infrastructure has deteriorated so people have to spend a lot of money on cars. They choose to live in far-away suburbs and buy big yards because they don't feel safe.

A key thesis of this book is that rising median real wages, that is working class pay, is the most important indicator of whether or not a nation will be able to achieve transformative quality of life improvements. As will be documented in depth in Chap. 2, Chinese median real wages grew roughly 13 percent per year from 1998 to 2009 and 8 to 9 percent per year from 2009 to 2021, more rapidly than the high growth rate of GDP. Even in 2023, a challenging time for the Chinese economy, real wages grew about 4 percent.

In Chaps. 3 and 4, I present a model of the Chinese economy that shows that rapidly rising real wages are the sine qua non, the "without which not," of the East Asian Development Model. Rising real wages force companies to be competitive and to upgrade production. Then, the workers who are made better off are able to buy the products the companies produce. When real wages stop rising, this benevolent cycle collapses. Without real wage growth, countries have to resort to unsustainable monetary stimulus that results in bubbles, rising consumer debt and rising income and wealth inequality.

Median real wages in the US have been stagnant, with almost no net growth, since 1979, the first year of the data series. Note that US GDP has not been stagnant during this period. The increase was captured by capital owners and increasingly by monopolistic rentiers. So the percentage of US GDP going to labor fell from about 65 percent to about 59 percent over the past 45 years. See Fig. 2.1 on page 31 which shows that rapid growth rate of median real wages in China. The US curve cannot be shown on the same graph because it is almost flat and near zero. See Fig. 2.2 on page 32.

The Chinese government has strongly pushed competition throughout the economy so Chinese concentration ratios have been falling while US monopolistic concentration has been rising rapidly. In most sectors, the Chinese economy is about half as concentrated as the equivalent sector in the US, so Chinese markets are much more competitive. See Chap. 2 for detailed information on competition levels and real wages in both countries.

The Chinese government has also made large investments that directly improve the quality of life of individuals. New parks, subways, high speed rail, 5G telecoms infrastructure, sewer systems and clean public toilets have been built everywhere over the last 10 to 15 years and are available free or at low prices. These investments may not create a high monetary return to capital investment and sometimes they don't lead to improvements in measured GDP, but they have increased the quality-of-life of hundreds of millions of people.

The statement that Chinese living standards are equivalent to those in the US does not mean that the lifestyles are exactly the same. The current pattern of resource use in the US could not be copied around the world—there simply are not enough resources on the planet. In the movies and on TV, housing seems better in the US than in China. But what we usually see in depictions of the US are actually upper-class housing. The waitresses on the *Friends* television show live in apartments that only rich New Yorkers can afford. Forty years or fifty years ago, most working-class people in the US lived in quite nice houses, but their living standards have declined so much that much housing is now substandard.

Median Chinese workers might not be able to buy the latest imported phone, but they can buy a Chinese label phone which provides equivalent value to them. Similarly, Chinese cars and a host of other manufactured products are a lot cheaper (in dollar terms) than cars in the US or in Europe and they provide basically the same value. This is because the Chinese car market, like most markets in China, is viciously competitive. Instead of rewarding just stockholders or a few top executives, the value in Chinese markets flows to workers and to consumers.

I purchased a Geely brand SUV for 140,000 RMB, the exchange rate equivalent of about 20,000 dollars. I am not a car expert, but I think this car is the equivalent of SUVs that would cost upwards of 60,000 dollars in the US. Not only are cars cheap, they are also less necessary. Almost anywhere in the US, my family would need at least two cars since there is no other way to get around and cities are poorly planned.

In the 2000s, many analysts argued that China was developed and prosperous only in a few Eastern coastal provinces and cities. That may have been so at that time, but large infrastructure investments have ensured that opportunities have vastly improved in inland China and in rural areas. Now, real living standards in much of inland China are equivalent or better than in the Eastern cities. After an emphasis on quality-of-life oriented reforms of the last decade, even remote areas of China have excellent public transportation and infrastructure, telecoms services, and public parks that are available free or at cheap prices.

Farmers in China mostly have a good quality of life. They have excellent public services—good roads and good telecoms services that allow them to get their goods to market and to avoid middlemen. Following centuries-old Chinese tradition, they often combine farming incomes with a small business. I'm envious of their houses, which are typically 4 or 5 stories with a total of 400 to 500 square meters (4000–5000 square feet) floor space. The family often runs a small business on the ground floor. Since 2007, they are not taxed on farm income. In contrast, many rural areas in the US do not even have high speed internet. They have no public transportation and often no parks or even safe places to walk. See Chap. 5 for a discussion of agricultural life quality.

There is a fairly standard trope in the US that Chinese live in "rabbit hutches in the sky." I have lived both in American suburban houses and in apartments in Beijing and in Yuxi. Of course, American houses can be nice for those who can afford them, but they are expensive to maintain and are inconvenient to stores or city services. I have found that Chinese high-rise apartments are usually nice inside and very convenient for daily life. They require a lot less expensive and time-consuming maintenance than American homes do, plus they require a lot less spending on cars. Chinese apartment clusters usually have well-maintained gardens available for the neighbors. It is a joy to watch the children playing together without fear or the need of much supervision.

China is also criticized for not creating an extensive welfare state. This criticism is partly based on a misunderstanding about the real value of Chinese incomes. A pension of, say, 2000 RMB per month looks like a miniscule $280 per month if converted at exchange rates, but if converted at the above "quality-of-life" rate of 1.2 to 1.6, it becomes equivalent to a much more generous $1250 to $1700 per month pension in the US, just a little less than the average US social security payment of $1979 per month. China's pensioners look even better off if we recognize that a large majority of them live with their families, so the pensions are a supplement to family incomes.

Making life affordable by enforcing market competition and by public investment is a substitute for a welfare state. Many jobs in small retail, street or park cleaning, driving and so forth can provide a living wage if the cost of living is low. Many small storefront businesses are viable in China because low productivity workers can be paid a livable wage. In the US, the once-vibrant small retail sector that anchored communities has been wiped out by oligopolistic big-box chainstores.

So, many more of these types of jobs are viable in China than in the US. This affordable-living/minimal-welfare-payment strategy has the important added benefit of not creating an entitlement mentality. In his writings on the importance of work, Nobel-prize winning economist Edmund Phelps argues that creating jobs is better than giving welfare payments both for society and for the workers or recipients.

In any society, there will be many people who might be low skilled or who might have overwhelming family obligations or otherwise can't have or don't want to have a high-pressure, highly productive job. In Yuxi, I see people maintaining the parks or cleaning the streets. Many small stores have workers who just wait for an occasional customer to come in. They might earn 2000 to 3000 RMB per month. Society has to make available to them a decent living. China has chosen to do that by ensuring that markets are highly competitive (driving down prices) and by making lots of worthwhile public investments (reducing the need for high incomes). Daily life is cheap enough that even low productivity jobs can be worthwhile and can make a meaningful contribution to a family's income. This has the added benefit that the low-level workers feel a sense of pride in that they are contributing to their family and to society.

The US has followed the opposite policies. It has allowed monopolies and highly expansionary monetary policy to raise the cost of living and wipe out good but low-skilled jobs. To deal with people who can't cope with the high costs, it has created a large welfare state both for poor people and for old people. These programs, along with military spending, are costing so much that in the US and Europe there is not enough capacity left to make needed public investments in infrastructure. The entitlement mentality created by welfare programs combined with the lack of low-level jobs and has contributed both to criminality and to psychological problems and despair among many people.

How Nations Succeed ≠ Why Nations Don't Fail

The title of this book, *How Nations Succeed*, is an obvious riposte to the famous *Why Nations Fail* by 2024 Nobel prize winners Daron Acemoglu and James A. Robinson. My conclusion is that *Why Nations Fail* does not explain the great success of China, other East Asian economies, or such nineteenth century successes as Germany, Japan or the United States.

Acemoglu and Robinson divide economies into "extractive" vs "inclusive" categories. In extractive economies, an entrenched governing elite prevents average people from taking advantage of opportunities, thus stymying economic or technological development. Apart from economics, *Why Nations Fail* argues that electoral democracies lead to economic inclusiveness. They aren't clear whether the electoral system is necessary, sufficient, or neither.

Ignoring the fact that Chinese median real wages have increased more than 8x in the last 25 years while American wages have been stagnant for the last 50 years, Acemoglu and Robinson insist on placing China into the extractive category. They write,

> China under the rule of the Communist Party is another example of society experiencing growth under extractive institutions and is similarly unlikely to generate sustained growth unless it undergoes a fundamental political transformation toward inclusive political institutions.[4]

In classical discussions of "democracy," outcomes matter more than the details of the system. Does the economy benefit the average people, the *demos*, or not? Throughout this book, I will argue that the Chinese *demos* has benefitted greatly during the period since the reform and opening up began in 1978. Average Chinese people are now much better off than they were 45 or 25 or even 15 years ago. During these same years, the living standards of average American workers have stagnated, at best. Which of these nations is extractive?

Acemoglu and Robinson's thesis is an elaboration of the so-called "Whig interpretation of history," which says that Britain, and no one else, successfully started the industrial revolution because of "inclusive" institutions set up after the Glorious Revolution of 1688 replaced the authoritarian Stuart King James II with parliamentary rule under the constitutional monarchy of William and Mary. This is consistent with the "institutionalist" theories of economic development going back to the

---

[4] Daron Acemoglu and James A. Robinson, *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*, Crown Currency, 2013, p. 150.

famous 1973 book *The Rise of the Western World: A New Economic History*[5] by Douglass North and Robert Thomas.

Acemoglu and Robinson describe the Glorious Revolution institutions this way:

> The government adopted a set of economic institutions that provided incentives for investment, trade and innovation. It steadfastly enforced property rights, including patents granting property rights for ideas, thereby providing a major stimulus for investment. It protected law and order. Historically unprecedented was the application of English law to all citizens.[6]

All these things are now done by the Chinese government.

If I were to very briefly summarize the reasons for China's success, I would use two concepts: (1) competition and (2) investment in transportation and telecoms infrastructure. Acemoglu and Robinson's description of the real implementation of the theories of the Glorious Revolution sounds even more like China today. They write:

> Investment in canals and roads, the so-called turnpikes, massively increased after 1688. These investments, by reducing the costs of transportation, helped to create an important prerequisite for the Industrial Revolution.

Throughout the book, they discuss the effects of monopolies on economic growth and on life quality. Quoting English historian Christopher Hill, they discuss the daily life of an average Englishman under the Stuart monarchy's monopolies:

> A man lived in a house built with monopoly bricks, with windows…of monopoly glass, heated by monopoly coal,…burning in a grate made of monopoly iron…He washed himself in monopoly soap, his clothes in monopoly starch. He dressed in monopoly lace, monopoly linen, monopoly leather, monopoly gold thread…" and on and on.[7]

Acemoglu and Robinson do not agree with the so-called "Law and Economics" economists who argue that markets will not naturally create monopolies. That is, they fear that monopolies will frequently arise. Yet their main hope to stop this rise is that democratically elected governments can break up the monopolies and promote competition:

> Markets, left to their own devices, can cease to be inclusive, becoming increasingly dominated by the economically and politically powerful. Inclusive economic institutions require not just markets, but inclusive markets that create a level playing field and economic opportunities for the majority of the people. Widespread monopoly, backed by the political power of the elite, contradicts this. But the reaction (in the US in the late 19th and 20th centuries) to the monopoly trusts also illustrates when political institutions are inclusive, they create a countervailing force against the movements away from inclusive markets.[8]

This book will show, in Chap. 2 below, that this hope has been in vain in the US for the past 50 years or so. The rise of monopoly power has been one of the main factors in transferring wealth from the working class to a small elite. By the dual criteria of

[5] Douglass C. North and Robert Paul Thomas, *The Rise of the Western World: A New Economic History*, Cambridge University Press, 1973.

[6] Acemoglu and Robinson, p. 102.

[7] Acemoglu and Robinson, p. 188.

[8] Acemoglu and Robinson, p. 323.

infrastructure investment and preventing monopolies—China has come much closer to the Glorious Revolution ideals than has the US. China has much more competitive markets and has now much better infrastructure.

Why Nations Fail rejects the hypothesis that cultural characteristics explain levels of economic development. I argue that the recent history of the US and China proves that institutions affect culture and, in turn, culture affects institutions. You can't just parachute a set of institutions into a country and expect them to work.

Economist Edmund Phelps argues that values and culture are crucial factors in determining the success or failure of an economy. He writes:

> …a sufficient endowment of appropriate values in a nation can supply the necessary fuel for the dynamism needed to achieve the levels of indigenous innovation that are in turn necessary for widespread flourishing…Of course, liberty and capitalism are not sufficient on their own either—a huge point that many commentators and economists appear to be unaware of.[9]

Phelps' 2013 book *Mass Flourishing: How Grassroots Innovation Created Jobs, Challenge, and Change*[10] has had a large influence on Chinese policy. His emphasis on innovation and jobs is consistent with the very long Chinese tradition of small businesses and also with the Chinese emphasis on family support. Phelps' emphasis on the importance of jobs should be essential to any thought about how to create a good economy and society. He stresses that being employed brings "feelings of self-respect, esteem in the community, a sense of economic independence … and job satisfactions."

Phelps continued:

> (T)he creation of better job opportunities is likely to produce a gain in the dignity and self-respect of workers who catch those opportunities… People draw satisfactions from being self-supporting and from being a provider to others in need—one's child or an elderly parent or other to whom one is obligated. The material rewards from work become of huge importance when they are large enough to enable a person to be self-supporting—to earn by one's own efforts the opportunity to enjoy the basic comforts, to have a family, and to share to a degree in the life of the community. Few circumstances undermine a person's self-esteem more than the dependency on others for such material support.[11]

The effects of institutions on culture and vice-versa is illustrated by the social results of China's policy of making low level jobs livable by making daily life cheap versus the Western policy of creating entitlement programs to counter high costs of living. Entitlement programs have limited the lives of recipients and following generations, creating a cultural change. Jobs, even low-level jobs, create a feeling of dignity, social cohesion, and offer future possibilities. The US economic policies that allowed monopolization and financialization to drive up the cost of daily life have made a jobs-based policy impossible. These policies, which at first appear to be

---

[9] Edmund S. Phelps, *My Journeys in Economic Theory*, New York: Columbia University Press, 2023. p. 191.

[10] Edmund S. Phelps, *Mass Flourishing: How Grassroots Innovation Created Jobs, Challenge and Change*, Princeton: Princeton University Press, 2013.

[11] Edmund S. Phelps, *My Journeys in Economic Theory*, op.cit., p. 126.

purely economic policies, have huge and continuing impacts on social cohesion and on culture. If institutions are not supported by culture, or if the institutions actively destroy the culture, then the economic system will collapse.

An anecdote from renowned University of Chicago economist Milton Friedman, author of *Capitalism and Freedom* among many other books, illustrates how policymakers and economists can emphasize individual short-term efficiency without considering overall societal benefits. In a possibly apocryphal but oft-cited story, Friedman saw road construction being done by workers using shovels while visiting China. He asked his host why they did not use earth-moving equipment. The host replied that a lot of jobs would be wiped out. Friedman famously quipped, "Why don't they use spoons?" In my view, this quip is cute but ridiculous. Apart from the fact that capital equipment was very scarce in China at the time, it ignores the fact that low productivity workers need jobs, or the alternative is welfare state support.

The US Midwest in its heyday (1870 to 1970) was widely prosperous, with generally low crime, low inequality and minimal social problems. This resulted from culture and institutions developed together. The Northwest Ordinance of 1787 laid the framework of small farmer-businessmen but it would not have been successful if the people of that time were not guided by a values and ideals which, in that case, derived from Christianity.

The Chinese economy of small farmer/businessmen in the era before the Opium Wars was a prosperous and beautiful economy. In many ways, the current Chinese culture of entrepreneurship is a continuation of the business culture of that era. It was supported by legal institutions but also by the Confucian concept of *ren*, often translated as benevolence, that limited the pure greed of even Manchu officials. Today, the Confucian benevolence is further strengthened by the core Marxist doctrine of working-class solidarity.

For an American today, it is hard to be optimistic that problems can be solved by purely institutional changes, without changes in culture and values. In the terms used by Acemoglu and Robinson, apparently small changes in government policies changed the US economy in the direction of extraction, but it is very hard to reverse course because the culture was changed in the process. Writing about the Mayan city-states but in a way striking to contemporary Americans, they write:

> Infighting and instability are thus inherent features of extractive institutions, and they not only create further inefficiencies but also often reverse any political centralization, sometimes even leading to the total breakdown of law and order and descent into chaos,…[12]

Acemoglu and Robinson wrote *Why Nations Fail* at the end of the decade of the 2000s, a time when it appeared that American institutions might be leading to rapid technological progress that would improve the lives of average people. It still appeared then that the American tech establishment might be characterized by

[12] Acemoglu and Robinson, *Why Nations Fail*, p. 150.

competition rather than by monopolies. When they published in 2010, it also still appeared that the financial collapse might be a blip that changed the economy for only a short time.

What happened instead was that the Obama administration decided to promote concentration in Silicon Valley, in banking, and in most other industries. From a huge variety of highly competitive firms in the year 2000, Silicon Valley came to be dominated by five or six firms that are able to stifle potential competitors. American finance became dominated by a few large financial firms, who make money by political influence, insider information, and risky investments. After the financial crisis, the Federal Reserve engineered several rounds of quantitative easing, which means intervening in markets to increase the value of assets—obviously to the benefit of already wealthy asset owners.

This followed the Clinton administration, which passed banking law changes that transferred a lot of economic power to a few Wall Street banks and the Bush administration which greatly expanded the power of the national security state. I summarize the recent economic history of the US as follows: The Clinton administration gave the Wall Street banks everything they wanted. The Bush II administration gave the national security/intelligence establishment everything it wanted. Then the Obama administration gave the banks and the Silicon Valley monopolists everything they wanted. These changes amounted to a fundamental change in American institutions.

Apparently small institutional changes, which were little noted by the general public and may have seemed reasonable at the time, have shaped the nature of the US economy and the lives of average Americans. Both before and after the Clinton-Bush II-Obama changes, American institutions could have been publicized as capitalist, market-oriented, and in most ways derived from the 1689 institutions, but the consequences of the institutional changes for the wages of average people and for the nature and pace of technological change were substantially bad.

Acemoglu and Robinson acknowledge that small, even unnoticeable, changes in institutions can result in large changes in future outcomes. If so, that makes it hard to derive policy recommendations from the theory. "Don't be extractive" provides some guidance, but not enough for policymakers.

The phrase "Why Nations Fail" implies that if the causes of failure could be removed, then a nation could be successful. It the nation could just get rid of negative institutions or policies, then it could become rich. International policies such as the Washington Consensus are attempts to implement this idea.

The Chinese learned that such policies do not work from the Russian economic collapse after Prime Minister Gaidar implemented shock therapy along the lines of the Glorious Revolution ideals. Most economists learned from that episode that institutions need to be constructed gradually.

This book goes further. I argue that few, if any, economies developed by following anything like the Glorious Revolution policies. China did not, but neither did Japan (either post WWII or in the nineteenth century), imperial Germany, Western Europe after WWII, or South Korea. Even the US high growth periods included steep tariffs and lots of public or public-directed infrastructure. Britain itself might or might not be the exception, but it took at least 150 years for the industrial revolution to pay off for British workers.

Instead of just avoiding negative institutions, nations need to take positive steps toward development. At least in the cases of East Asian economies, these positive steps included two principal policies: (1) ensuring high levels of competition in the provision of goods and services, and (2) government policies that push high levels of investment. Together, these two policies lead to the third pillar of development, real wage growth.

For any reforms to be successful, the government needs to develop the appropriate state capacity to administer markets (preventing monopolization) and to push investment. (This is similar to what Acemoglu and Robinson call centralization.) Few if any poor countries have this needed state capacity at the early stages of development, so the state will have to learn over time. China grew in a series of stages discussed below. In each stage, the state focused its policies on implementing reforms and policies needed at that stage.

Even with the best intentions, few states have been able to follow this long process successfully. But, as Acemoglu and Robinson stress, many governments don't have the best of intentions. The ruling class is often just interested in maximizing its own extraction. China is one of the few states that has been able to create a governance system and a general culture that supports inclusive growth.

Governance and Society

In their Nobel-prize winning work that founded *public choice theory*, economists James Buchanan and Gordon Tullock[13] argued that government employees, like everybody else, make decisions based on maximizing their own positions, either by taking wealth for themselves or by improving their own bureaucratic or political position. Since Buchanan and Tullock are often associated with libertarian or free market policy, it is ironic that their theory in fact destroys the libertarian ideal of a "night watchman state" limited to protecting property rights, enforcing contracts, and preventing crime.

If government employees are primarily self-interested, how can a nation limit their greed or their predatory behavior? China and the US have different approaches to deal with this fundamental governance dilemma.

The US has tried two approaches. The system of checks and balances between the three branches of the federal government combined with frequent elections is supposed to prevent any official from gaining too much power. The second means is moral. Throughout much of American history, politicians and government officials

[13] James M. Buchanan and Gordon Tullock, *The Calculus of Consent: Logical Foundations of Constitutional Democracy*, University of Michigan Press, 1962.

were somewhat constrained by the maxims of Christianity—though for many this was only a slight constraint.

In the famous words of James Madison, principal writer of the Constitution and fourth president:

> Is there no virtue among us? If there be not, we are in a wretched situation. No theoretical checks, no form of government can render us secure. To suppose that any form of government will secure liberty or happiness without any virtue in the people, is a chimerical idea.[14]

As we will see in Chap. 2, in the US neither virtue nor checks and balances have been effective at preventing the rise of highly extractive monopolies which have taken from the middle and working classes over the last 50 years. Furthermore, politicians and bureaucrats have somehow been able to become wealthy on relatively modest public salaries. Inflation-adjusted spending on lobbying has gone up at least 4 times since 1980—indicating that a lot of money is made through extraction rather than productivity.

In China, the core governance philosophy of Confucianism has acted as a moral constraint on the potential greediness of government officials. The core tenets of Marxism have added to this Confucian ideal by teaching a morality focused on protecting and helping the working class and, more generally, average people rather than a small elite. Like Christian ideals, Marxist and Confucian ideals are often ignored by many who profess them. But they do impose some moral constraint on the behaviors of government officials who could become purely predatory.

Also, membership in the Communist Party acts as a rough parallel to checks and balances for government officials at all levels. Belief in Party ideas (or, in the worst case, fear of Party discipline) is a check on potential wealth-maximization by government officials.

I have had the chance to meet some Chinese government officials at a variety of levels—from village and local officials, to mayors and a few provincial party secretaries and ministers. Of course, I have had limited experience since I am not immersed in the system, but what I have seen is that most are hard-working, highly skilled, and mostly aim to improve the lot of people in their regions.

Why Nations Fail gives many examples of viciously rapacious rulers who are only concerned with extracting as much as possible from those subject to their depredations. For example, Friedrich von Gentz, a senior official of the Austro-Hungarian empire in the early nineteenth century, is quoted as saying: "We do not at all desire that the great masses shall become well off and independent…How could we otherwise rule over them?"[15]

That is certainly not the attitude of Chinese government officials who, instead, generally focus on improving the quality-of-life and capabilities of Chinese people. Acemoglu and Robinson insist on calling the Chinese government "extractive," but they seem to have little knowledge of what life is actually like in China. As we will

---

[14] National Center for Constitutional Studies, https://nccs.net/blogs/articles/only-a-virtuous-people-are-capable-of-freedom.

[15] Acemoglu and Robinson, op.cit., p., 224.

explore in Chap. 2, the unprecedented rapid rise in the standard of living of average Chinese people indicates that its policies are actually one of the most inclusive in the history of the world. How could people whose real wages multiplied 8 times in 25 years and whose real quality of life rose even faster be the victims of extraction?

The quality of life in China has improved almost incredibly in the last decades, and not only materially. For a person familiar only with present-day China, reading about the lack of control and the criminality and violence only 20 years ago is almost unbelievable. For example, in his book about setting up a vegetable business in rural Zhejiang province, “The Lettuce Diaries,” Frenchman Xavier Naville tells of his wild adventures—including being kidnapped to ensure that his company would pay a debt. In a 2024 FT Chinese article, Liu Yuanju, writes: “Not long ago (in the 2000s), criminal gangs of young men from Wenjiang Village, Tiandeng County, in Guangxi were carrying out robberies in large parts of Guangdong, using brutal methods such as hacking victims hands and feet.”[16] I have spoken to many older Chinese who said they feared that their children would be kidnapped.

Now, China is a low-crime, safe society—so much so that everyday police presence is much less than in the US or Europe. One reason Chinese cities are now very pleasant is that no one fears being mugged. The Gallup Global Safety Report of 2025 shows that 94 percent of people in China, including women, feel safe to walk alone at night. In the US, only 71 percent of people, 58 percent of women, feel safe. Other Western countries are similar—78 percent of Germans, 76 percent of British, and 73 percent of French feel safe. All Western countries also have a large gender gap in safety perceptions.[17]

China is third in the world in terms of feelings of safety, behind, unsurprisingly, Singapore and, very surprisingly, Tajikistan. Gallup shows that safety feelings in the former Soviet countries were very low, around 30 percent, in 2006 but have since risen to US and Western European levels. I was in Tajikistan, along with other former Soviet republics, in the 1990s and early 2000s and confirm that feelings of fear were very tangible then. Dushanbe, the capital of Tajikistan, was outright dangerous. It is well beyond the scope of this book, but I hope someone can study how this improvement was achieved.

The US has changed from a high-trust to a very low-trust society. According to a 2022 World Values Study poll, 63 percent of Chinese agreed with the statement “most people can be trusted.” Only 37 percent of Americans agreed with this statement. China is one of the highest trust societies in the world, equaling Scandinavian countries.[18] Pew Research found that 73 percent of Americans trusted the Federal government to “do the right thing just about always or most of the time” in 1958.

---

[16] Translated by Yuxuan Jia and Zhu Yutao in *Pekinology* substack, “The Short Age of China’s Long Change,” https://www.pekinology.com/p/the-short-age-of-Chinas-long-change

[17] Gallup, The Global Safety Report 2025: A Safer World in Unsafe Times?, https://www.visualcapitalist.com/wp-content/uploads/2025/10/Gallup_Global-Safety-Report-2025.pdf.

[18] Esteban Ortiz-Ospinosa, Max Roser, and Pablo Arriagada, “Trust: How does interpersonal trust differ across societies and what role does it play in economic development?,” Our World in Data, April 2024. https://ourworldindata.org/trust.

That number fell to an all-time low of 15 percent in 2011 and is at 17 percent in 2025.[19]

The decline in trust and perceived safety among Americans is a rational response to changes in society and has affected their real well-being. Many Americans live in suburbs because they believe the cities are too crime-ridden and dangerous. They want large private yards because they are afraid to let their children play in public and because they don't trust their neighbors. They have to buy multiple cars because they fear riding on subways or buses (even in the rare instance when these are available) where they might be harassed, or worse, by criminals and drug addicts. The high feeling of safety and trust in Chinese society is a critical enabler to making public infrastructure work. In turn, this infrastructure makes daily life cheaper and more convenient.

To my amazement, I have seen that China is a lightly policed society in everyday life. There are ubiquitous cameras, but that is also true in the UK, where the fear of crime is high. In my own limited experiences, Chinese police and other government officials have been friendly and unfailingly polite. I have found that they are now sticklers for obeying the "rule of law," which is a major focus of the central government. Average citizens say that they can insist on their rights under the law. This seems to be a very different situation from the early 2000s. There has been real cultural change throughout the society.

How did this huge change occur? A substantial portion of the change can be explained by state capacity. Over this period, the Chinese government has become more organized and central government policies now have more enforceability throughout the country. Local government officials have become more professional and better educated, plus Party control over corrupt actions is much stronger. The 2000s were often known as the "bling dynasty" because richer people, including government officials, were eager to show off expensive watches and luxury cars. Corrupt officials can't be expected to enforce the law equally for average people. The anticorruption policy has put an end to much of this.

Average Chinese people are much better off, and less desperate people are less likely to commit crime. But I think the changes are deeper than that. China has become a much higher "trust" society and has more social capital than just 20 years ago.

To a degree that would surprise non-Chinese, the Chinese government sees its role as educational and moral—a view very much in the Confucian tradition. On many walls around the cities and in rural areas, there are signs exhorting people to be "civilized." Few of these slogans are about the government or the Party, most are about how to treat others in everyday life.

Some slogans on walls near my home include words to live by:

> Digital economics makes us rich and strong; Democracy; Be civilized; Be harmonious; Freedom; Equality; Fairness; Manage our country by law, not by human desire; Love of

[19] Pew Research Center, "Public Trust in Government: 1958-2025," December 4, 2025. https://www.pewresearch.org/politics/2025/12/04/public-trust-in-government-1958-2025/.

> country; Respect your job—be professional; Honesty: Be nice to people; Yuxi is a nice place for living; Treasure friendliness; Wash your hands often; Use the public chop sticks to get food from common bowl; Get rid of old bad habits; Exercise your body scientifically; Control your smoking and drinking; Show you are civilized by not wasting food; Let's pay attention to children's growth together to create a civilized future; Volunteer to help people and show the power of morality; Let's build our civilized city together and share this nice place with a green and clear river; Talk civilized; Do things civilized; Wait in line in a civilized way; Drive safely every day; Any word or any behavior exhibits Yuxi's civilization; All people think in the same direction to reach the China dream; Love innovation; Love entrepreneurs; Respect other opinions; Love your job and work hard; Love life; Respect science; Protect the environment; Be fair and upright; Talk and behave in a civilized way; Follow the law; Be honest; Respect teachers; Love your family, Respect senior people; Help poor people; Be dedicated to public welfare.

All these slogans might be viewed cynically in the West, but they have a real cultural impact and have a long cultural pedigree in China. In the park near my apartment in Yuxi, there is a stature showing a child washing his mother's feet, another shows a girl braiding her grandmother's hair, another shows a boy massaging his mother's back. These are all depicting ways to show devotion, respect, and proper behavior listed in the Confucian *Classic on Filial Piety*.[20]

Amusingly, many public bathroom urinals have a sign echoing Neil Armstrong: "One small step forward, a big step for civilization."

Instead of just passing laws or regulations to improve the environment, the government has tried to change the environmentalist culture of the people. President Xi Jinping's famous saying, "Clear waters and green hills are mountains of gold and silver," actually changed the attitudes of average people. I have heard it quoted many times in normal conversation. His drive to improve the cleanliness of public toilets has actually changed the way people act, especially in rural areas. Of course, the related regulations are necessary and the central government has systematically stepped up enforcement of environmental rules, but changing the perspectives of average people has also been critical. There are still people who dump trash along a rural road to save disposal costs, but this attitude is much less prominent now. Changing the culture has been an essential part of China's success.

Wang Huning's *America Against America*

Wang Huning, a former politics professor at Shanghai's Fudan University who is now a very senior leader of the Chinese government, wrote a fascinating book, *America Against America*[21] about the year he spent in the United States in 1987. In many ways, this book is an equivalent of de Tocqueville's *Democracy in America* of our times. More correctly, it is not about our times, the 2020s, but about an America and a China 35 years ago. His work reminds us how much has changed both in

[20] Thanks to Joshua Dominick for pointing this out to me.

[21] Wang Huning, *America Against America*, independently published 1991, kindle edition 2021.

America, changed mostly for the worse, and in China, which has changed mostly for the good.

Some of the changes are obvious. He was strongly impressed by the American infrastructure, computers, and cars in 1987—writing that 'anyone who arrives in the United States will feel a "future shock."' Now the comparison is the opposite. American and other Western visitors to China often feel like they are looking into a future society.

Looking at the late 1980s, Wang was impressed by American infrastructure. No Chinese visitor to the US would be favorably impressed today. All types of Chinese infrastructure are clearly better—more extensive, more convenient, and more modern—than the US has now. China's high speed rail system is impossible to imagine in the US. Over the past 10 years, China has made great investments in basic infrastructure—such as sewers and power systems. The campaign to build clean public toilets may seem simple, but it is very helpful to people's everyday lives. In the US there are few public toilets, and the ones that do exist are often filthy and dangerous.

Wang also extols American computerization and the phone system. Now, China is more advanced in both. Many Americans hate the poor service and high prices of the three cell phone oligopolies—AT&T, Verizon, and T-Mobile. Americans have to deal with frequent poor coverage, high prices, onerous contracts, and restrictions on phone use. Chinese cell phone users face none of these issues.

Wang describes the helpfulness and cheerfulness of American service providers—a description that would astonish Americans today. Chinese services are now easily available and the service companies are very helpful. Every time we return to the US, my wife comments on how bad service is. This reminds me of the common saying during the decades when the old AT&T, "Ma Bell," held a monopoly on US phone service: "We're the phone company. We don't care because we don't have to." Now, much of the US is like that.

In a chapter titled "Dogs and Cats are Not Free," Wang argues that detailed regulations restrict the true freedoms of Americans to a stronger extent than is seen in China.[22] He saw that "every area of (American) social life is defined by certain regulations.[23]" This kind of micromanagement of daily actions is much worse in the US now than it was in 1990. My impression is that the average Chinese is less burdened by regulations controlling his or her everyday life. For example, I see many young children spending hours a day playing, without too much parental supervision. Someone would call the police about this in the US. As community organizations have collapsed in the US, everyone wants everybody else to be regulated.

Robert Putnam, a Harvard University political science professor, has published a series of in-depth studies showing the impact of these economic policies on American society. In his book *Our Kids,*[24] he shows how his hometown in Ohio went from being egalitarian, pleasant, and opportunity-rich during his youth to now

[22] Wang Huning, ibid., p. 275.

[23] Wang Huning, ibid., p. 250.

[24] Robert D. Putnam, *Our Kids: The American Dream in Crisis*, New York: Simon & Schuster, 2015.

being a hellhole of social pathologies. In *Bowling Alone,*[25] he shows how the economic destruction has led to the death of community feeling. In *American Grace,*[26] he shows how the economic destruction, and the resultant failure of people to be able to provide for their families led to the collapse of the religious beliefs that used to constrain the worst excesses of selfishness and hedonism. In another famous work, Princeton economists Anne Case and Angus Deaton have shown that the economic collapse has led to growing "deaths of despair," including suicides, drug overdoses, alcoholism and depression.[27] People feel they have nothing to hope for and nothing to believe in.

Humans have a need for community, that is not measured by GDP. Many policies that might appear to be economically efficient but actually destroy communities are very destructive in the long term. In much of the US, economic policies have destroyed the informal connections, what social scientists call "social capital," that previously bound communities and families together. The US policies, discussed in Chap. 2, that destroyed long-established communities in the Midwest and elsewhere did a lot of social damage in addition to the economic destruction.

Wang saw that American institutions were a product of American history and culture. He wrote:

> It is worth noting that the mechanisms that exist in American society, both good and bad, are the product of the historical-social-cultural conditions of that society, and they exist only in that environment, and cannot simply be applied to other societies.

He added:

> One can come up with many specific concepts, such as innovation, struggle, thrift, and so on. The most important thing is whether these things can become a cultural gene, a tradition. No matter what factors are conducive to social development, if they do not constitute a tradition, they cannot be deeply rooted. For any good factor to have an effect, it must be the work of several generations. Americans talk about innovation all day long, but in reality tradition is very strong.[28]

Wang saw the start of deterioration in American society, especially the disintegration of families. He wrote:

> Does socio-economic development inevitably lead to the breakdown of the traditional family, as seems to be the path taken by American society. The dilemma is between modernization and traditional social structure….[29]

Comparing the US to Singapore, he added that Singapore sought to cushion the shock waves of modernization through Confucianism.

---

[25] Robert D. Putnam, *Bowling Alone: The Collapse and Revival of American Community*, New York: Simon & Schuster, 2001.

[26] Robert D. Putnam and David E. Campbell, *American Grace: How Religion Divides and Unites Us*, New York: Simon & Schuster, 2010.

[27] Anne Case and Angus Deaton, *Deaths of Despair and the Future of Capitalism*, Princeton: Princeton University Press, 2021.

[28] Wang Huning, op.cit., pp. 10 and 23.

[29] Wang Huning, op.cit., p. 624.

In his great book based on his travels in 1830s America, the French aristocrat Alexis De Tocqueville argues that the successes of American culture and politics were based on a web of clubs, unions, and other organizations that formed the social lives of most Americans.[30] Tocqueville argued that America's nineteenth century economy and governance system worked only because of the high social capital of the people at that time.

Most Chinese have much stronger ties to extended family members than do Americans. Most also have an extensive friend network, which they cultivate assiduously. Elderly Chinese usually have a very active social life—taking care of their grandchildren plus square dancing and playing cards with friends almost every day. Parents are almost universally strongly involved in the schooling of their children. Many Chinese people have good family and social-network support, possibly living in a multi-generational house, so they don't need as much money as most people in the West. Social capital is now stronger in China—you don't see the kind of hopeless slums so prevalent in US and European cities.

On the other hand, Chinese are famously wary of doing business with people they don't know. Recently, the government has made markets work by regulations that reduce this wariness. For example, businesses, especially online businesses, are required to follow very strong return policies for purchased goods.

Strengthening social capital and improving "virtue" has been a crucial enabler of China's economic transformation. This was partly accomplished by law enforcement and anticorruption policies, but just importantly it was accomplished by education and social transformation.

Economic systems strongly affect culture in ways that are very long lasting. At least as long ago as the Song dynasty, a thousand years ago, China agriculture was characterized by small farmers who usually had small businesses on the side—creating a prosperous entrepreneurial trading culture centered on the Yangtze delta region. (See Chap. 5.) Remnants of this long cultural tradition are seen in agricultural regions and in China's highly entrepreneurial industrial clusters today.

Eight Reforms

China's process of transformation can be thought of as a matrix with *Types of Reform* on one axis and *Historical Stages* on the other. As the transformation progressed, China faced a sequence of highly varied problems and thus had to develop new solutions appropriate to the specific time.

The Chinese reformers concluded that reform is a sequential process, some reforms will not work unless preceded by other reforms. A similar argument can be made for infrastructure. Building first class infrastructure is useless if the private sector is not ready to utilize it and if there is not enough state capacity to maintain

[30] Alexis De Tocqueville, *Democracy in America*, kindle edition, translated by Henry Reeve.

it. All these reforms cannot glibly be described as market reforms, though there is a lot of emphasis on promoting competition. That is, China's reform process did not simply remove the reasons that nations have failed.

Competition

Competition is an essential part of China's economic model. This includes market competition for goods and services but also includes competition among local and provincial governments and also among State-owned enterprises. Without competition among enterprises, income would have flowed to capital owners rather than workers. And without real wage increases, there would have been little pressure on companies to learn or to upgrade their products. Thus, without competition, the benevolent cycle of quality-of-life improvements cannot occur.

Prominent economist Qian Yingyi argues that "federalism," both market and institutional competition between regional governments,[31] has enabled China to maintain a commitment to preserving market incentives. Similarly, Jin Keyu stresses the "mayor economy" as a major driver of development. This is very similar to US Supreme Court Justice Louis Brandeis' argument that US states are "laboratories of democracy." It may be that very large countries such as the US and China have more scope to encourage internal competition than do smaller countries.

State-owned enterprises are a potential obstacle to competition, but there is no theoretical or practical reason that they should be more of an obstacle than are large private monopolistic or oligopolistic corporations. Both SOEs and monopolies are able to exert unfair advantages against competitive entrepreneurs. But many Chinese SOEs are in sectors that require economies of scale and thus are natural monopolies—these SOEs should be thought of as regulated monopolies. In the case of telecoms companies, the SOEs compete more strongly than the oligopolistic telecoms in the West. Many Chinese SOEs are provincially owned and thus compete against other "provincial champions." Nevertheless, I do think that SOE suppression of private competitors is a danger to China's future growth.

Capital Accumulation

A central argument of this book is that competitive market allocation of *current goods and services* is critical to creating an economy that is widely beneficial to the bulk of a population, but, at the same time, market determination of the level or direction of *capital* investment prevents countries from developing. As is explained

[31]Yingyi Qian, *How Reform Worked in China: The Transition from Plan to Market*, Cambridge, MA: MIT Press, 2017. Seen Chaps. 7 and 8.

in Chap. 4, market allocation of capital leads to both less than optimal total investment and also to monopolization.

Many governments around the world have attempted to use directed investment to promote growth, but most have failed. In many cases, governments took resources from farmers and used the capital to invest in monopolistic and corrupt enterprises. China and a few East Asian economies succeeded by (1) setting up the financial system to encourage high levels of saving and (2) enforcing internal or international competition.

Clusters and Business Learning

China's enterprises have been learning organizations. Strong competition has forced them to learn or die. What is nearly unique to China is the development of local clusters of highly competitive but also cooperative companies in one industry. There are small cities that specialize in toys or buttons or guitars or mattresses or fishing rods and so forth. In each cluster there will be dozens of suppliers all levels plus final product producers. Naturally, the people living in the cluster region will develop skills that are not available elsewhere. In areas centered on the larger cities, especially Shenzhen and Hangzhou, complicated clusters of clusters have developed. Some of these clusters focus on new technologies and are thus an important part of China's competitive advantage for the future.

These clusters are much more resilient than the industrial structure seen in the US. Many US cities have collapsed economically because they were dominated by one large vertically integrated company that might be headquartered elsewhere and which does not draw on local suppliers.

Opening up to Foreign Countries

Opening up to foreign ideas and foreign markets has been a critical part of China's reform since 1978. However, this opening up has been very different from the multinational corporation investment and international loans seen in many developing countries.

In many countries, multinationals just build final assembly plants (which I refer to as *maquiladoras* in Chap. 6) to take advantage of low-cost labor. Some of this happened in China, but in China it was part of a learning and development process. Chinese local companies became suppliers to the multinational plants, learning how to produce essential components. Eventually, they learned how to produce final products. In a process called "catfishing," the Chinese government has encouraged foreign companies to enter its market to put competitive quality and price pressure on local companies, forcing them to upgrade to world standards. For example, Tesla's entry into the Chinese market forced local electric vehicle producers to improve their quality.

Having learned from the Asian financial crisis of 1997–1998 and the US financial crash of 2008, China has opened up to foreign direct investment, but, unlike many developing countries decided not to open up to foreign debt or other short-term capital flows.

State Capacity and Institutions

China has developed a regulatory system and commercial law system quite similar in form to that of the US and Europe. For example, it has national banking, securities, and insurance regulators with functions very similar to those of Western countries. Businesses sue each other like happens in the US. The rule of law is much stronger now as the state capacity has been developed to enforce it. China observed the disastrous consequences of sudden "shock therapy" for the post-Soviet economies and chose to develop institutions to support competitive markets systematically over time.

Rural, Lower-Tier City and Inland Revitalization

In the 1980s and 1990s, development first occurred in Eastern provinces with easy access to ports. However, infrastructure investment in inland areas has enabled formerly remote provinces to participate in the national and international markets. The central government has focused on ensuring that people living in smaller cities and rural areas have access to good transportation and communications. This has enabled millions of entrepreneurs throughout the country to develop businesses that sharply raise the living standards of their families and their workers. The infrastructure investment tapped a vast market of both producers and consumers.

Quality-of-Life Improvement and Making Life Affordable

In its initial stages, China focused on raising GDP and on raising real wages by ensuring competitive markets. Since 2010 or so, there has also been a large focus on making investments that improve everyday quality of life. Some investments such as railroads, roads, or telecoms both increase GDP and improve the quality-of-life. Some, such as subways, make life more convenient and are also beneficial for commerce. Others, such as the huge investment in parks by Chinese cities, has little direct effect on GDP but greatly improve the quality-of-life of people living in urban areas. Combined with strong market competition, this quality-of-life investment has been key to China's economic strategy of making daily life affordable.

Environmental Improvement

Just 10 years ago, the air quality in Beijing was awful. Now, the Chinese government has used both investment and regulation to vastly improve both air and water quality. Yuxi, which is located in a basin surrounded by mountains, recently closed a steel mill—resulting in much better air quality. On a small scale, central government programs have led to much cleaner public toilets. All these changes are another component in creating a high quality-of-life.

Historical Stages of Chinese Transformation

Since the founding of the People's Republic of China in 1949, economic policies can be broken into seven periods which each had very distinct policy methods and goals.

1949–1953 (Approximately) Land-to-the-Tiller

Immediately after the revolution in 1949, the Chinese government continued the policy it had started during the civil war of assigning small farmers the rights to the land they occupied. Rents and other payments to landlords were abolished. As we will see in Chap. 5 below on agriculture, this was a continuation of the long-standing historical pattern in which Chinese rural areas were peopled by small farmers who often combined agriculture with small-scale commerce and industry. However, this policy was officially changed in 1953 and was largely abolished by 1956.

1953–1979 (Approx.) Planned Economy and Rural Collectivization

The key economic problem with an economy based on small-scale agriculture was that it did not form a basis for rapid industrialization. Beginning in 1953, China switched to a Soviet-style planned economy based on urban industry. The hope was that collectivization of villages would improve agricultural productivity through economies of scale and thus would also make it possible for the government to tax agriculture to accumulate the seed capital for industry.

In the Maoist era, China had an extreme version of a planned economy. To make even small daily purchases, people had to have a government-issued coupon for the product in addition to money. In some times, villagers were not even allowed to grow and eat their own eggs and each village had a "big kitchen" where all families were required to eat. All production was through government agencies or collective farms. As in the Soviet Union, this did allow China to build some large factories and measured GDP rose during part of the Maoist era, but people were so disincentivized that improving living standards was impossible.

1979–1992 (Approx.) Crossing the River by Feeling for Stones

Deng Xiaoping's famous quote that China was "crossing the river by feeling for stones," implying that reforms were rather ad hoc experiments without a clear model, was true only in the first 15 years of the reform period, at most. During this period, China's new leaders knew something had to change, but did not have a detailed program and were thus experimenting with new institutions and new economic strategies.

By 1978, it was clear that the disincentives of collectivization outweighed any gains from economies of scale. Agricultural productivity had become so low that there was essentially no surplus available for urban industrial investment. So the central and local governments began a series of reforms that recognized the need for individual incentives. This period was a time of institutional experimentation that recognized the need for markets incentives while still somewhat trying to adhere to Maoist orthodoxy.

In the countryside, "traditional village enterprises" allowed farmers to build up small businesses, often under the near fiction of village ownership. At the same time, experiments with special economic zones along the coast allowed foreign investors to take advantage of a large supply of cheap labor. This initial influx of foreign-owned industry allowed Chinese workers and entrepreneurs to learn about production and supply chains and to develop technical expertise.

The rural reform in this era, which was essentially a return to a "land to the tiller" system, was fundamental because it removed the threat of hunger which had plagued China throughout history. It also demonstrated the effectiveness of making improvements in microeconomic incentives.

1992–2001 World "Best Practices," Liberalization, Institution-Building, and Capital Accumulation

China's reform started off with almost no market institutions or legal commercial institutions. New institutions were built in a continuous process at the same time the economy was developing. Beginning with the Zhu Rongji reforms in the 1990s, China's institutions began to develop in a way somewhat modeled after Western standard institutions, of course adapted to fit the Chinese situation.

Until the early 1990s, most Chinese workers were assigned to a work unit. The coupon system tied rural workers to their own village. Throughout the 1990s, the labor market was freed up, so that workers found their own jobs and negotiated their own wages. By the year 2000, the labor market was essentially market-determined.

Throughout the 1980s and 1990s, China implemented a series of reforms designed to incentivize productivity and the efficient use of resources through competition. China's model of competition includes large and small private firms, but, in sharp contrast to most Western economies, it also includes competitive State-owned enterprises (such as the three telecoms providers) plus large SOEs that produce inputs used by downstream competitive firms, such as energy producer and heavy materials processors. China also has very active and constantly interventionist antitrust enforcement.

The State-Owned Enterprise reforms in the late 1990s changed government agencies into corporations owned by the government. The reforms kept large scale industry, especially industry that resembled utilities, as SOEs but allowed the private sector to dominate almost all retail sectors of the economy and many types of production. Obviously, this pushed many workers into unemployment. The private sector was growing rapidly, but many jobs were in Southern China, while much of the unemployment was due to the closure of large, inefficient factories in Northeast China. By 2000, almost all daily consumption items and most factors of production were allocated by the price mechanism and produced by private firms.

Although I have labeled this era the global best practices period, it is important to realize that China never fully bought into all the practices, especially financial practices, being implemented in the US, Europe, or even in the other East Asian development states. China's key problem in this era was how to accumulate capital. The previous era had shown that forced transfers from farmers would not work. While small business building in rural areas might have eventually led to a prosperous economy, that kind of capital accumulation was slow and many of those businesses were unlikely to become globally competitive. China's financial system was reformed to encourage high savings rates and also to direct capital toward industrial production and infrastructure.

China decided to run large current account surpluses, to protect themselves from the foreign debt trap that plagued the Asian tigers. Because the Asian tigers were borrowing in US dollars, they were subject to exchange rate risk and interest rate risk. It might seem to make little sense for a capital-poor country to run current account surpluses, but the lessons of the Asian financial crisis led China to believe that that was the safest path. The biggest benefit was that the influx of foreign-owned manufacturing expertise provided both lessons and opportunities for the Chinese private sector.

During the 1990s and 2000s, the Chinese small business sector was a learning machine. Quickly learning to compete with and surpass the capabilities of Western companies, which often were used to operating in a less competitive, more concentrated markets. Chinese entrepreneurs quickly established extensive supply chains and industrial clusters that were unmatched around the world. This would not have been possible if Western loans were the major source of capital.

2001–2010: Export-Oriented Growth, Creation of Industrial Clusters, Infrastructure Investment

Before the year 2000, the US and Chinese economies had little effect on each other. The Chinese SEZ's were important to China, but their exports were negligible compared to those of Japan or the Asian Tigers. In the debate over the North American Free Trade Agreement, Mexico was considered the likely source of American low-wage imports. Ross Perot's "giant sucking sound" was to Mexico, not China.

After joining the WTO in 2001, China's exports rose rapidly but, at least as importantly, China's reforms and its private sector also grew rapidly. Over the course of the decade, China changed from being a low wage source for foreign investment to having a very powerful indigenous manufacturing sector with a vibrant entrepreneurial sector.

Chinese policy makers also saw the damage done to the South Korean, Thai, Russian and other economies during the Asian Financial Crisis of 1997–1998 because of their dependence on loans from Western banks or the IMF. China decided to rely on Foreign Direct Investment instead of loans because this reduced the risk of sudden capital withdrawals due to slight changes in dollar interest rates and because FDI almost always involved a transfer of technology and business practices.

Professor Wen Tiejun of Renmin University, who participated in high-level policy debates in the late 1990s, emphasized that China moved to infrastructure investment, especially in the west, in response to the Asian financial crisis of 1997–1998.[32] He said that the Asian Financial Crisis convinced the government that they could not just rely on overseas markets, which turned out to be highly variable. So, in this period, the Chinese strategy of competition, rapid real wage growth and high investment rates developed further.

2010–2022—Quality-of-Life Reforms Combined with Technology Upgrading

In the 2010s, China began to shift from an emphasis on growing pure GDP to improving the quality of life. Many of the investments made in the 2010s focused on projects with either a long return or a non-economic, life-quality improving return. Investments in improving healthcare and education won't pay off for a

[32] Conversation with Wen Tiejun, 2024.

generation. Reduction in pollution often reduces measured GDP but actually leads to real life improvements. Construction of pleasant cities makes life cheaper and nicer for average people but does not directly increase GDP. In the 2010s, the Chinese government also emphasized antitrust policies as a way to promote competition and to ensure that benefits flow to consumers and workers.

Anywhere in the world, the economic returns to infrastructure are hard to measure because there are so many externalities. During the 2010s, a large part of China's economy was focused on construction, either of infrastructure of housing. This has created the best infrastructure in the world and some of the best housing stock in the world. Some of the advantages created by this construction are difficult to measure, but it is clear that average Chinese people are much better off now than in 2010.

2022-Forward—Transition to a New Growth Model Focusing on Industrial Upgrading, Common Prosperity, and Rural Revitalization

China is now in the midst of a difficult transition from what had been a very successful development model. A great challenge moving forward will be how to adapt resources, people and capital, to new purposes as the need for additional construction declines.

In response to the 2008 US financial crisis and, later, in response to the Covid pandemic, monetary stimulus was used to counter economic shocks, but this also caused housing prices to soar because the stimulus money had to be spent somewhere. The government does not want to see a sharp collapse of real estate prices, but the current level of housing prices has been very harmful to Chinese society and economic progress.

Over the reform and opening up period, rapid decision-making, "China speed," has been a key advantage of China's industry and government. Unfortunately, in 2025 many businessmen tell me local governments have become slow at making decisions and that SOEs are using their connections to prevent private sector competition. If this is widespread, it is a potentially very harmful move from the highly competitive economy that has fueled China's economic growth and improved the lives of average Chinese.

The transition period will be difficult and long-lasting, but China does have a coherent plan to move to another period of economic growth and quality-of-life improvement. The Chinese central government has laid out a set of overarching policies for future growth, which can be summarized by slogans; "industrial upgrading," "common prosperity," "rural revitalization." This strategy is designed to continue raising the incomes of average people by moving the economy into higher value-added production. For any country, it is impossible to predict significant future shifts, but the Chinese government has clear, logical goals and consistent programs for implementing them. As I see it, China has two main avenues for future real growth: (1) applying new technologies to real production in its world leading factories and manufacturing clusters and (2) increasing productivity growth, small businesses, and consumption in smaller cities and rural areas. Chapter 8 discusses these opportunities and the related strategies in detail.

Chapter 2
A Comparative History of the Chinese and US Economies, 1979–2025

1979 was the beginning of big changes in both the US and Chinese economies. Few, if any, analysts or policymakers understood how fundamental were the coming changes in the quality-of-life of the two peoples, especially for the working people of each country. I have found no economist who predicted that 1979 was the beginning of a long, 46 years and counting, stagnation in the life-quality of American working people or of an almost miraculous improvement in Chinese life-quality.

In the US, Franklin Roosevelt's New Deal policies which had enabled the sharp increase in the standard of living of average Americans and the 30-year postwar miracle economies in Western Europe and Japan were collapsing. As it happens, 1979 was the first year the US Bureau of Labor Statistics published data on median real wages in the US—the best single measure available of the life-quality of average people. Median real wages in the US have been stagnant, with a few minor ups and downs, since the series became available in 1979. For many workers in the lower paid sectors, especially industrial production, the reality is even worse. Wages have fallen rather than stagnated.

Exactly comparable data is unavailable, but it is likely that the stagnation in US wages started earlier, sometime in the mid-to-early 1970s, after President Nixon had to convert the dollar to a purely fiat currency, due to the profligate fiscal and monetary policies of the 1960s and 1970s.

The collapse in the US working class, as measured by median real wages, started long before China had any impact on the US economy. As late as the year 2000, China had a total GDP a bit less than France—though it had progressed strongly, starting as one of the poorest countries in the world in the 1970s. Just 25 years ago, the Chinese economy was too small to be considered a major player in the world economy and certainly not a rival to the US economy. In most of the debates about trade in the 1990s, Mexico was predicted to be the likely site for replacing US labor. Furthermore, economists and politicians thought that low-income countries would just be used as assembly sites for US and European countries. No one anticipated

D. Blair, *How Nations Succeed*, China and Globalization,
https://doi.org/10.1007/978-981-92-2059-5_2

that China would develop its own indigenous production and technology ecosystems in almost all sectors.

In 1979, China was also in transition. In December of 1978, the famous Third Plenum of the 11th Central Committee of the CPC took the first tentative steps of economic reform, though no one knew where the transition would lead and certainly no one expected that the next 40-some years would raise a desperately poor people to a level that rivals the US in quality-of-life, total economic product, and technology.

Wages in China and the US

China's wage history is sharply different from that of the US. Figure 2.1, on page 31, shows "average" real wage growth in China from 1979 to the present. Before the reforms of Premier Zhu Rongji in the late 1990s, wages were largely not market determined, so data before that time is not comparable, but we do see significant improvements in Chinese life-quality in the 1980s and 1990s. Real wages increased 5x (500 percent) from 2000 to 2015 and a further 75 percent from 2015 to 2025, amounting to a real wage increase of 8.7x from 2000 to 2025. Real wages had already multiplied 2.7x from 1979 to 1999. So, from the start of reform in 1980 to 2025, real average wages rose a total of more than 23x.

So, the quality-of-life of an average Chinese in 2025 is so much better than in 1979 that it has been a qualitative transformation—not just an incremental improvement. Compared to 2000 or even 2010, the average Chinese now leads a much, much better life. The life-quality of average Chinese has been fundamentally transformed during a time when the life-quality of working-class Americans has deteriorated. Note also that Chinese real wages in almost all years have grown at or above the growth rate of real GDP.

Figure 2.1 shows the growth rates of real GDP and of real wages in China since 1985. Though GDP growth rates fluctuated greatly before 1998, real wages grew significantly, averaging about 5 percent growth per year. From 1998 to 2009, real wages grew at almost 13 percent per year, higher than the already high GDP growth rates. From the US financial crisis in 2009 to the start of the pandemic in early 2020, real wages grew at 8 to 9 percent per year, again higher than GDP growth of about 5 percent per year. After the pandemic, real wages grew at 4 to 5 percent a year, roughly matching the growth of GDP. In this chart, I have labeled each data point of real wage growth rates because it is of special interest to the argument of this book.

The US Bureau of Labor Statistics calculates that median real weekly earnings of US wage and salary workers rose only a total of 12.1 percent over 46 years (compared to 2300 percent in China). That is, US real wages thus rose only 0.22 percent per year average over those years. Worse, much of that slight growth happened during and after the Covid pandemic as many people left the work force.

Figure 2.2, on page 32, shows US real wage and real GDP growth rates. I had to put the US real wage growth rate on a separate chart because on Fig. 2.1 it would be almost invisible, close to the zero-growth horizontal line, compared to the Chinese

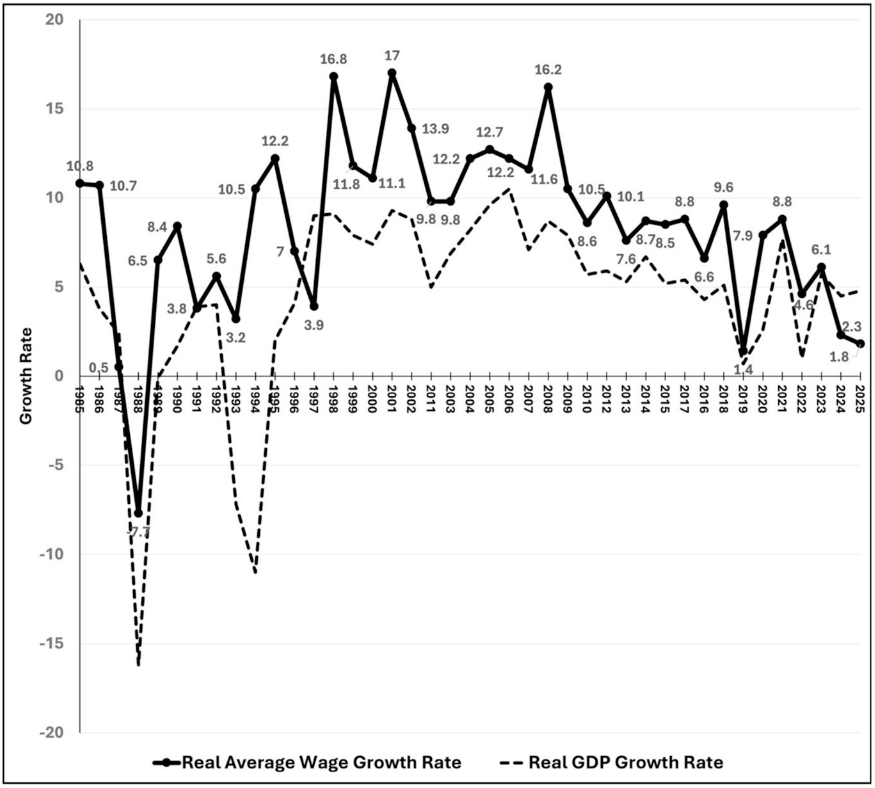

Fig. 2.1 China real wage and real GDP growth rates. *Sources*: All data is from the National Bureau of Statistics of China, as reported in Trading Economics data sets "China Average Yearly Wages" (https://tradingeconomics.com/china/wages) and "China Full Year GDP Growth" (https://tradingeconomics.com/china/full-year-gdp-growth). The inflation adjustment is made using "China Inflation Rate Year-on-Year" (https://tradingeconomics.com/china/inflation-cpi)

real wage growth rate. US real wages have grown much less than the growth rate of real GDP, meaning that workers are getting a smaller share of the pie. Note the much different vertical scale on the US chart.

Comparing Figs. 2.1 and 2.2, a big difference is that the Chinese real wage growth rate consistently exceeds the Chinese real GDP growth rate. On the other hand, the US real wage growth rate has consistently been less than the US real GDP growth rate. This means that the very fast rise in Chinese real GDP benefitted Chinese workers more than proportionately compared to capital owners. The significant rise in US real GDP since 1980 has not benefitted US workers.

US family income did increase slightly more rapidly than wages. For the middle quintile of Americans, total family compensation rose about 45 percent from 1979

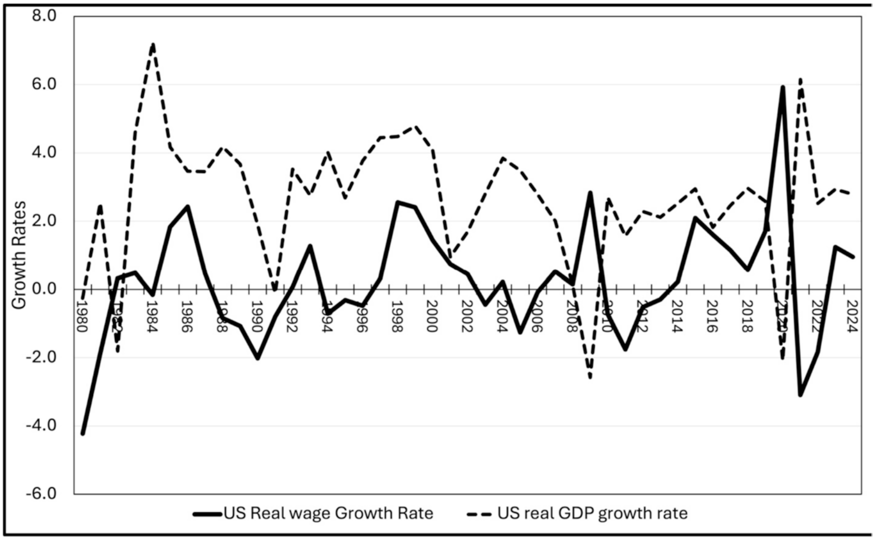

Fig. 2.2 US real wage and real GDP growth rates. *Sources*: U.S. Bureau of Labor Statistics, Employed full time: Median usual weekly real earnings: Wage and salary workers: 16 years and over [LES1252881600Q], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/LES1252881600Q, March 5, 2026. U.S. Bureau of Economic Analysis, Real Gross Domestic Product [GDPC1], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/GDPC1, March 5, 2026

to 2021, an average annual growth rate of 0.89 percent.[1] However, during this period a higher percentage of women joined the workforce, so family earners often went from one worker to two.

In the US, the situation may be worse than these real wage numbers indicate. Prices for healthcare and for a university education have risen much faster than inflation, but they are only indirectly included in the consumer price index. Working people were hit hard. Attending a university has long been a way that young people could become better off than their parents, but that path has been closed off for many.

A general problem in the US is that the federal government created very large entitlement programs without putting any price controls on the suppliers, who are often monopolistic. These suppliers naturally saw an opportunity to raise their prices dramatically without being constrained by consumer demand. Thus, many services that were cheap and competitive formerly have become very expensive and monopolistic.

Health insurance costs rose sharply during the period—growing from 4 percent of total compensation in 1979 to 7.1 percent in 2022, so take home pay rose even slower than total compensation. The insurance system means that individual patients

[1] Calculated from Jennifer Nash, "US Household Incomes over 50+ years: The Great Divide," *Vetta Fi Advisor Perspectives*, September 17, 2025. https://www.advisorperspectives.com/dshort/updates/2025/09/17/u-s-household-incomes-over-50-years-the-great-divide.

have no incentives to control costs while hospitals, which have come under highly concentrated ownership, have large incentives and ability to increase prices.

In university education, the federal student loan program gives students the ability to finance their tuitions and living expenses, without placing any price limits on tuition. Obviously, this created strong incentives for the universities to raise their tuitions, grabbing the gains for themselves. Universities created many new majors, many of which did not lead to general productivity increases (often the opposite) and did not lead to good jobs for the students. For those who do graduate, student loans made to pay for increasingly expensive education limit their future life choices.

At the same time, the quality of public and elementary education has fallen sharply (as measured by student test scores or any other measures). In addition, teachers often are lower quality—education majors have some of the lowest SAT scores across college majors[2]—and seek to indoctrinate students in their own beliefs rather than teach basics. So, middle class families are confronted with the hard choice of leaving their children in low quality schools, paying a lot for private education, or buying an increasingly expensive house in the remaining good public school districts. The net effect is that education, which is one of the main enablers by which students have more successful lives, is being closed off to middle class and especially, working class children.

Also, the US real wage numbers include only people actually working, but the percentage of working age people holding a job has fallen from 67 percent in 2000 to less than 64 percent today (2025).[3] Indicating that a significant group of people has simply given up hope of finding a job.

In China, two factors indicate that the real quality of life has risen even faster than real wage growth. First, much of the government infrastructure investment since 2010 has been for projects (parks, transportation, telecoms, schools, sanitation) that improve the lives of average people but is not counted in their wages. Plus, the quality of life in rural areas has risen sharply (as we discuss in Chap. 5), but much of the income in these areas is not accounted for. Many farmers are also entrepreneurs, who have much unreported income.

Obviously, a critical question for China's future is whether it will be able to continue real wage growth as the economy transitions to a new growth model. Goldman Sachs recently concluded that real wages grew 3.9 percent year-on-year in 2025 Q2, the lowest since 1998, except for the pandemic.[4] The Western press uniformly

---

[2] Natasha Bertrand, "Here's the Average SAT Score for Every College Major," *Business Insider,* October 25, 2014. https://www.businessinsider.com/heres-the-average-sat-score-for-every-college-major-2014-10.

[3] Francisco Perez-Arce and Maria J. Prados, "The Decline in US Labor Force Participation Rate: A Literature Review," https://dornsife.usc.edu/mprados/wp-content/uploads/sites/203/2023/12/Perez_Prados_MS_Decline_in_US_labor_force_participation_a_Review.pdf.

[4] "Our revamped wage tracker shows gradual softening in wage growth," EdwardConard.com, https://www.edwardconard.com/macro-roundup/a-gs-analysis-finds-as-of-q2-chinese-wages-grew-3-9-y-y-1pp-lower-than-the-official-level-the-goldman-estimates-would-be-the-lowest-chinese-wage-growth-on-record-excluding-the-pandemic-period/?view=detail.

described this as "weak" or "alarming," but his is still far higher than any year of US real wage growth since 1979 (excluding the fluctuations of the pandemic). More worrying for China, private sector real wages in 2025 Q2 y-o-y rose only 1.9 percent, indicating a shift toward government jobs or to State-owned Enterprises.

One mitigating factor for China is that apartment purchase prices have fallen since 2021, so new purchasers will be better off. On the other hand, people who purchased apartments earlier will be worse off, at least they have not seen the capital gains they expected. The fall in apartment prices also will affect consumption, especially for luxury items such as expensive cars or foreign university education.

It is often argued that Chinese workers get a lower share of national income than workers in Western countries do. This was once true, but it is not true anymore. Figure 2.3, on page 35, shows that the share of Chinese GDP going to labor compensation had stabilized at about 58.5 percent before the pandemic. Curiously, the Chinese labor share was falling in the 2000s even though real wages were rising very rapidly then. Falling from roughly 64 percent in the "glorious 30 years" after WWII, the US labor share fell to roughly 59 percent in 2020, before the pandemic. So, the labor shares in the two countries have become about the same in the 2020s. Both the US and China saw their labor shares fall sharply during the pandemic. As of 2024, that share had not begun to rise again in either country—a very bad trend if it continues.

Despite the oft-perceived labor friendliness of European countries, both the US and China have consistently had a higher labor share of GDP, on the range of 2–3 percentage points, than the most developed Europeans. That is, the European members of the G7 (UK, France, Germany, Italy, plus Canada) and the median of 18 advanced economies have lower labor shares than either the US, China, or the other Northeast Asian advanced economies.[5]

Drivers of Stagnation of American Real Wages

A central argument of this book is that the US wage stagnation and the related decline in labor share of GDP since the 1970s were driven by four US domestic policies:

(a) The decision by the federal government to not enforce antitrust laws. The government actively encouraged the growth of oligopolies in finance and in tech. And we see reduced competition in almost all sectors of the economy.
(b) A series of reforms in US banking laws and regulations in the 1990s and after the 2008 financial crisis concentrated financial assets in the hands of a few banks and other financial companies, largely in New York. Under the New Deal

---

[5] Martin Sommer, "Why are Japanese Wages So Sluggish?," International Monetary Fund Working Paper WP/09/97, May 2009. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&uact=8&ved=0CDMQFjADahUKEwi7u7ab5YrIAhWBbR4KHfzfAXE&url=https%3A%2F%2Fwww.imf.org%2Fexternal%2Fpubs%2Fft%2Fwp%2F2009%2Fwp0997.pdf&usg=AFQjCNFGh8COmQnR-uJAKWNLTa-DTR%2D%2DEQ&sig2=Vl7EConKv2LHmMGxr0nrJA.

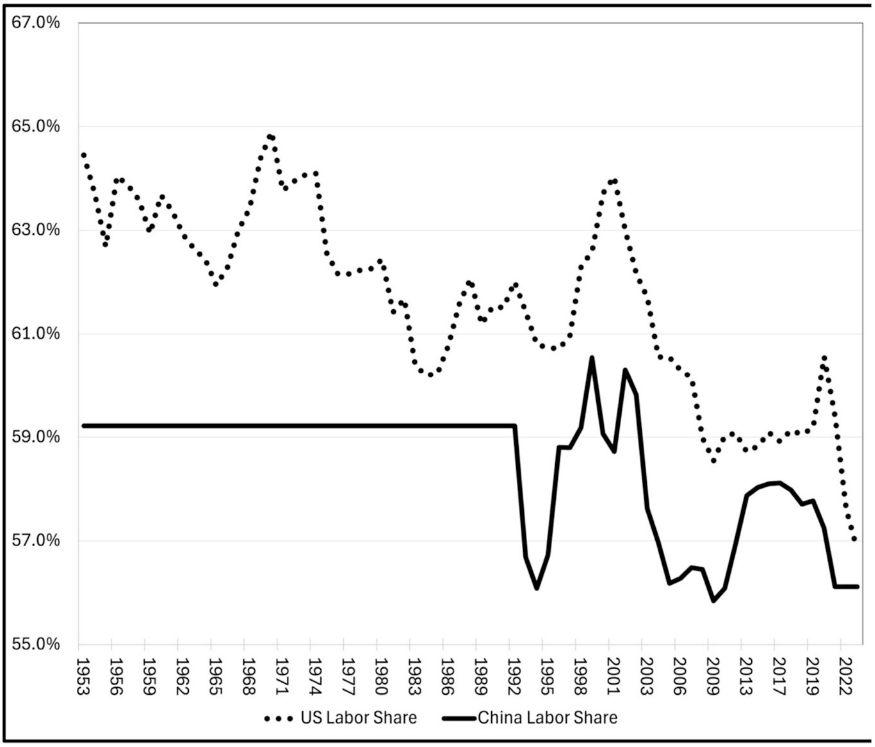

Fig. 2.3 US and China labor share of GDP. *Sources*: University of Groningen and University of California, Davis, Share of Labour Compensation in GDP at Current National Prices for United States [LABSHPUSA156NRUG], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/LABSHPUSA156NRUG. University of Groningen and University of California, Davis, Share of Labour Compensation in GDP at Current National Prices for China [LABSHPCNA156NRUG], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/LABSHPCNA156NRUG

banking system, the banks' primary business was making safe loans to established industries and for home mortgages. Local banks also had an important business line making investment and working capital loans to small and medium sized companies in their area. After the reforms of the 1990s, banks were no longer incentivized to make loans to such real economy businesses. Their most profitable business lines became (1) fees from facilitation of corporate deals, (2) investing in risky companies that might gain monopolistic returns, and (3) making loans to risky "subprime" consumers.

(c) The Federal Reserve used highly expansionary monetary policy to create a series of booms in asset prices, including the dot-com boom of the late 1990s, the housing boom of 2001–2008, and the current (2011–2026 and counting) boom in both stock prices and housing prices. Artificially increasing asset prices has the effect of redistributing wealth to already wealthy asset owners.

(d) Because of its special international role, the exchange rates of the dollar are determined primarily by international capital flows, often short term, rather than by product trade or by relative quality of life. There are many benefits to goods and services trade, but we have found out the hard way that there are few net benefits from international capital flows for working and middle-class Americans.

This set of policies, often labeled neo-liberal, that started in the last years of the Carter administration, expanded in the Reagan administration and that came to culmination in the Clinton administration caused the stagnation of wages in the US.

By 1979, the golden years of the New Deal era were already over. Both inflation and unemployment were at record levels. The US economy was perceived by both Republicans and Democrats to be over-regulated. In short, the US economy was in trouble in 1979 and neo-liberalism seemed like a way out. Clearly some of the US policies, especially the financial system changes of the 1990s, were pushed by self-serving policymakers. But many people who supported these policies were not nefarious. They often just did not understand the consequences for average Americans.

These "neo-liberal" policies should not be seen as free market. They were sold as encouraging markets and reducing regulation, but in actuality they just changed the type of regulation and directed returns to a favored types of business and favored groups. Chinese policies have been significantly more market-oriented than have those of the US.

Chinese real wages have risen mostly because Chinese policymakers have not followed this agenda. Chinese antitrust authorities have been very active in suppressing anti-competitive behavior in most sectors. Thus, China has reduced returns to monopoly capital and has also reaped the benefits of market competition. The Chinese banking and finance system remains tightly controlled and is largely focused on making loans to industrial or infrastructure projects, plus some consumer loans. Chinese monetary policy has been less expansionary than that of the US Federal Reserve. Loans to real estate projects and local governments have created a housing price boom, though, as we will see, at a much lesser scale than we now see in the US stock or housing markets.

China is often accused of being the cause of America's wage stagnation, but the timing makes no sense. Before the year 2000, the US and Chinese economies had little effect on each other. The Chinese new export-oriented Special Economic Zones were important to China, but in 2000 their exports were negligible compared to those of Japan or the Asian Tigers. In the US debate over free trade agreements, Mexico was considered the likely source of American low-wage imports. Ross Perot's "giant sucking sound" was to Mexico, not China. After China joined the WTO in 2000, low value-added exports to the US did soar, but for almost a decade this export boom was driven by multinational corporations which thought they were taking advantage of low wage Chinese workers, not the other way around.

Chinese small companies used this period to develop entrepreneurial expertise and to build complex local clusters of suppliers. At the same time, wages were rising rapidly, so these companies could not continue to rely on a labor cost advantage. They were forced to innovate and upgrade both their products and their production processes.

Unlike the other Northeast Asian industrializers, China's exports largely originate from small and medium-sized enterprises. Exporters in Guangdong and Zhejiang provinces are prototypical Adam Smithian entrepreneurs. In the meantime, Americans have lost a lot of entrepreneurial experience in the manufacturing sector and have not developed supplier clusters. Any re-shoring of American industry is likely to be done by large multinational companies, not local entrepreneurs.

Monopolization and Oligopolization

Surprising to most, the Chinese economy is closer to being a competitive market economy than is the US. In most sectors, China has much more competitive markets than we find in the US.

A 2014 *Journal of Economic Literature* paper by Jun Wang and John Whalley calculated the concentration ratios of industrial subsectors in the US and China.[6] They summarize:

> China has sharply lower concentration ratios, in the order of one-half of the US, for 4 firm ratios. One possible implication is that markets for Chinese manufactured products are considerably more competitive than in the US.

Furthermore, China has rapidly become less concentrated while the US has become more concentrated. In the 2002–2007 period looked at by Wang and Whalley, many Chinese sectors saw the concentration ratio fall by half or more. Total manufacturing 4-firm concentration fell from 20.8 to 15.5 percent. Only three out of 22 categories, showed rising concentration ratios. In contrast, the US total manufacturing 4-firm concentration ratio rose from 36.5 to 38.5 percent over the 2002–2007 time period.

Matt Stoler's book *Goliath*[7] is a detailed history of the political decisions that allowed rising monopoly power in the US and his blog "Big" provides current accounts of how more and more sectors are becoming monopolized.[8]

Over a longer time period, US 4-firm concentration ratios rose even more. From 1990 to 2016, finance sector concentration rose from 24 to 35 percent, services from

---

[6] Jun Wang, John Whalley, "Are Chinese markets for manufactured products more competitive than in the US. A comparison of China-US industrial concentration ratios," *NBER Working Paper Series*, Working paper 19898, http://www.nber.org/papers/w19898. Also published in *Journal of Economic Literature*, February 2014.

[7] Matt Stoler, *Goliath: The 100-year War Between Monopoly Power and Democracy*, Simon and Schuster, 2019.

[8] *BIG by Matt Stoler: The history and politics of monopoly power*, https://open.substack.com/pub/mattstoller.

11 to 15 percent, utilities and transportation from 29 to 36 percent, retail trade from 16 to 29 percent, wholesale trade from 22 to 29 percent and manufacturing from 41 to 43 percent.[9]

Obviously, the concentration ratios will be higher if we look at smaller product categories or over sub-national geographic regions. For example, most areas in the US have just one or two grocery stores, which are owned by large regional chains. In smaller cities and rural areas, Walmart has driven local competitors out of business so that it has a local monopoly in food sales.

Almost everywhere in China, there are many farmers' markets selling abundant fresh food at cheap prices. Near my home in Yuxi, there are four farmers' markets within walking distance, several chains of grocery stores, plus a Walmart. There are also lots of bakeries plus tea and coffee suppliers. Every time I return to the US, I dread dealing with the high prices and limited variety of groceries, especially of fruits and vegetables.

China Pathfinder, a research organization, has developed an index of market competition in countries which does on the other hand conclude that competition in the US and China in 2023 were about the same—38 in China vs 36 in the US. South Korea is 45 and most European countries are in the 60s. So, by this index, China has one of the most competitive markets in the world. On this index, China was at 56 in 2010 while the US was at 40—showing rapid improvements in China over the last decade.[10] The reason this index shows that China is only about equal to the US in market competition is that it includes financial markets as a large part of the index and reduces the measure of competition if state-owned enterprises are in a market. Many SOEs are basically regulated utilities which may look monopolistic but which are not allowed to take monopolistic profits. If we look at product sectors, Chinese markets are much more competitive than the US.

MIT professor David Autor and his colleagues have taken an in-depth look at the cause and effects of rising US monopolization. They argue that most US sectors have been taken over by a "winner take most" large firm that is able to drive out competition. Big companies win because they are big, not because they are good.

Autor and his colleagues found that rising concentration ratios were an important cause of the decline in US real wages and the falling share of GDP going to labor. They summarize that:

> (i) there has been a rise in sales concentration within four-digit industries across the vast bulk of the U.S. private sector; (ii) industries with larger increases in product market concentration have experienced larger declines in the labor share; …[11]

---

[9] David Autor, David Dorn, Lawrence F. Katz, Christina Patterson, John Van Reenen, "Concentrating on the Fall of the Labor Share," *NBER Working Paper Series*, Working Paper 23108, http://www.nber.org/papers/w23108.

[10] https://chinapathfinder.org/market-competition/.

[11] David Autor, David Dorn, Lawrence F. Katz, Christina Patterson, and John Van Reenen, "The Fall of the Labor Share and the Rise of Superstar Firms," *NBER Working Paper Series* 23396, www.nber.org/papers/w23396.

Even worse, the US concentration since 2000 has been "non-productive," carried out to grab monopoly profits, rather than productive concentration that could increase efficiency or economies of scale. That is, the increased monopolization of the US economy is not due to productivity-enhancing mergers or to incompetent companies dropping out. In the US, large firms can establish a cozy relationship with government to maintain their monopolistic position. The US financial system also gives large monopolistic firms special access to long-term financing that is not available to smaller companies.

A 2019 paper in the *Review of Finance* by Grullon et al. concluded that increased profits do not reflect increased productivity:

> Since the late 1990s, over 75% of US industries have experienced an increase in concentration levels. We find that firms in industries with the largest increases in product market concentration show higher profit margins and more profitable mergers and acquisitions deals. At the same time, we find no evidence for a significant increase in operational efficiency.[12]

Similarly, a 2019 paper by Covarrubias et al. showed that non-productive concentration dominated US markets after 2000:

> During the 1990s, and at low levels of initial concentration, we find evidence of efficient concentration driven by tougher price competition, intangible investment, and increasing productivity of leaders. After 2000, however, the evidence suggests inefficient concentration, decreasing investment, and increased barriers to entry as leaders become more entrenched and concentration is associated with lower investment, higher prices, and lower productivity growth.[13]

The bottom line of all this recent research is that the US economy has become more monopolistic and that this falling market competition is hurting American workers. During the New Deal and the post-war golden years, the US government strongly enforced antitrust laws, resulting in rising living standards for most people. Since 1979, especially since 1990, we have seen the consequences of deciding not to enforce antitrust laws.

In contrast, the Chinese government has actively used antitrust law to prevent large firms from taking advantage of their suppliers or their customers. Thus, China has reduced returns to monopoly capital and has also reaped the benefits of market competition.

Compare, for example, the cases of Amazon in the US and Alibaba's Taobao platform in China. These two companies are essentially in the same business—providing an electronic market for third party firms to sell to consumers. Amazon has used its market power to prevent third party firms from selling for a lower price on any other sales venue. Thus, Amazon is able to ensure that customers can't find

---

[12] Gustavo Grullon, Yelena Larkin, and Roni Michaely, "Are US Industries Becoming More Concentrated?," *Review of Finance*, Volume 23, Issue 4, July 2019, pages 697–743. https://academic.oup.com/rof/article-abstract/23/4/697/5477414?redirectedFrom=fulltext.

[13] Matias Covarrubias, German Gutierrez, and Thomas Phillipon, "From Good to Bad Concentration? US Industries over the past 30 Years," *NBER Macroeconomics Annual*, Volume 34, 2019. https://www.journals.uchicago.edu/doi/full/10.1086/707169.

lower prices by searching on other online stores. This allows Amazon to take most of the economic value from its sellers. Even worse, Amazon was found to be using sales and customer data to produce products under its own label to compete directly with the third-party sellers. Tim Wu, a lawyer and the author of the best-selling book *Age of Extraction* described the US platforms as "some of history's most advanced tools for extraction of wealth."[14]

Alibaba also tried to use its market power to prevent third-party sellers from selling on other platforms. But the Chinese market regulators quickly stepped in to prevent this restraint of trade. The result is that there are many such directly competitive electronic markets in China. Taobao, JingDong, and Pinduoduo, are well-known, but there are many others. Consumers in China get much better service at highly competitive prices than is available in the US. And, sellers and producers are able to keep more of their economic product. That is, China's antitrust enforcement has strengthened producers and consumers by restraining the power of the tech platform middleman. The US has allowed the middleman platforms to keep the bulk of the profits. Both Amazon and Ebay have tried to compete in China, but they have failed because they are used to a monopolized market and are unable to succeed in China's highly competitive market.

Amazon lost money for the first 7 years of its existence (1994–2002) and begun to show significant revenue growth only in 2005–2006. Plus, its retail sales branch was likely subsidized by its web services branch for much longer. Why were Amazon's investors willing to put up with low returns for so long? This is only possible because (1) Amazon's investors were betting that the company would gain monopolistic profits in the future, and (2) the low-interest rate regime created by the Federal Reserve made normal industrial investments unprofitable so investors focused on riskier returns with potential for very high returns.

"Reform" of the US Banking System in the 1990s

The president of one of the largest US banks once explained to me why he does not want people like me as a customer. Because I don't bounce checks at the end of the month, pay off my credit cards every month and on-time, and because low interest rates make the returns on deposits very low, the bank has no way to make a profit from my account. That is, they can't charge large fees on my banking account. If I were richer (or less savvy about the worthlessness of managed funds), the investment banking section of the bank could hope to make fees from managing my wealth. For US consumer banks, the most profitable customer is a lower income worker who has financial problems each month but probably won't default in the end. Most profits come from fees on such customers, not from lending.

[14] Tim Wu, *The Age of Extraction: How Tech Platforms Conquered the Economy and Threaten Our Future Prosperity*, Knopf, 2025.

The bank does originate home loans, but it is not actually doing the lending. The local bank is just doing the paperwork to create the loan. It will collect a fee for this service, then sell the loan to investors. That is, the investors are actually providing the capital for the loan, not the bank. Sometimes the investors will be pension funds or other large institutional investors, but often the purchasers will be the federal government through Fannie Mae, Freddie Mac, or the Federal Home Loan Bank. The primary trigger for the 2008 financial crisis is that many institutional investors had greatly underestimated the risks in their portfolios of home loans.

The other profit center for the US financial system is lending to or investing in risky businesses that might gain very high monopolistic profits in the end. Banks lend to private equity or venture capital firms which are seeking high returns. Since the partners in these PE and VC firms are making relatively small investments, typically less than 10 percent, the commercial banks who loan to them are actually bearing most of the risk for only a small percentage of the upside. Banks are willing to do this only because they have few other profit opportunities in the kind of easy money regime the Fed has created since 1995.

Apart from the risks of catastrophic financial collapse, the main problem with the US banking system is that it has little incentive to make loans to established industrial firms or to small businesses. These loans would require a lot of due diligence and, because interest rates are low, have little profit for the bank. The real problem is that bank business models now focus on risky investments and on subprime loans to consumers, not on loans to the real economy of industry and small business.

The US banking system was not always like this. Until the 1980s, banking was a moderately well-paid, unadventurous profession, like law or medicine. The old system could be summarized by the 3–6–3 rule: Bank presidents borrowed at 3 percent, loaned at 6 percent and were on the golf course at 3 pm. The inflation of the 1970s followed by the very high real interest rates of the Volcker disinflation made this business model untenable. In response, in 1985 the banking regulators removed regulation Q, which had prohibited commercial banks from paying interest to depositors. Both the depositors at the banks and the companies and homeowners that had borrowed from the banks were searching for higher returns.

In the late 1980s, Savings and Loans, a kind of local bank, began investing heavily in risky commercial real estate, strip malls and the like. When that market collapsed, the Federal government had to bail out the S&Ls, costing 2 percent of GDP. So, by the early 1990s, the US banking system was a mess.

The US government could have tried to go back to the New Deal system which tightly controlled the investments banks could make and which had sustained the stable economy of 1945–1970—the system that had led to rapid improvements in the wages and life quality of working class and middle class Americans.

After 1993, the new Clinton administration decided to "deregulate" the banking system. The result of these policies was to concentrate financial power in the banks, investment funds, and private equity firms of Wall Street. The new banking system also led to unstable boom/bust periods and to steering investment away from traditional industries and small businesses.

The old banking regulation mostly prohibited interstate banking, though some banks were using holding companies to get around the regulation. In the 1980s, there were thirty thousand banks in the US. In each state, sometimes in each county, a local bank existed which had the business model of accepting deposits from local people and lending that money to local businesses or homeowners.

The Interstate Banking Act of 1994 changed that model by allowing very large banks to establish branches throughout the country. The result was that 90 percent of US bank deposits are now controlled by ten very large banks. The legal and data processing requirements imposed by the George W. Bush administration after the 2001 terror attacks, made small banks even less viable. As of 2025, there are approximately 4000 banks left in the US, a drop of 87 percent. Most of the banking capital is now controlled by a handful of very large banks.

The risky business model was reinforced by the Gramm-Leach-Bliley Act of 1999, which repealed the Glass-Steagall Act of 1933 that had been the cornerstone of the New Deal banking system. To prevent a repeat of the risky bank behavior that led to the 1929 crash, President Roosevelt prohibited commercial banks, which were allowed to take deposits from the general public, from investing in company equities and strongly regulated them to stop risky investments. Only investment banks, which could not take deposits, were allowed to buy equity or to pursue other risky investments. The Gramm-Leach-Bliley Act allowed commercial banks and investment banks to merge, meaning that few restrictions on risky investments remained.

Before 1999, the investment banks were partnerships, meaning that the partners had their own personal wealth at risk if the banks' investments failed. The Clinton administration allowed them all the become limited liability corporations.

It is not a coincidence that these banking changes, which are a direct repudiation of policies supported by the Democrat party since the Roosevelt administration, were brought about at a time that the Clinton administration's economic policy was largely determined by bankers, especially Robert Rubin, who was a president of Goldman Sachs before entering the government and was vice-Chairman of Citigroup after leaving office. Lower level offices were also held by bankers, most prominently from Goldman Sachs. During this era a common ironic saying in Washington was "In Goldman We Trust." It must be stressed that these changes were bipartisan. The Republican Congress, led by Senator Phil Gramm of Texas, strongly supported Clinton's policies.

All this was advertised as a free market reform. It was actually a restructuring of the entire US financial system which concentrated capital into a small number of companies and redirected capital into new, risky tech firms away from traditional industries. It was a large factor in the de-industrialization of America and the decline of the American working class. Few people, even few economists, understood what was happening at the time.

Because of these financial system changes and stagnant wages, large portions of Americans came to depend on borrowing to pay for current consumption. The personal savings rate varied from 10 to 15 percent of disposable income in the 1960s and 1970s. The rate fell a bit from 10 percent in 1979 to roughly 8 percent throughout 1990 and then declined steadily to around 2 percent in 2005. There were large fluctuations stimulated by the global financial crisis of 2008, the subsequent quantitative easing and then the pandemic, but the rate seems to have stabilized at around 5 percent in the 2020s.[15]

There are Americans who still save a lot, but the new financial system chose to redirect those savings to borrowers, often subprime borrowers. So, the entire economic system has come to depend on consumption financed by debt, often high-interest rate credit card debt or car loans. Now, cars have become so expensive that people are taking out 7-year loans, which were unheard of just 10 years ago.

This system of consumption lending could not work if consumers could run up a debt and just declare bankruptcy to escape crippling debt. So, the government closed this possibility with the bankruptcy reform of 2005, which stripped millions of households of the ability to escape debt, protected this business model. The bill had bi-partisan support and was sponsored by then-Senator Joe Biden, whose state of Delaware is the home to several major credit card lenders. The largest of which, MBNA, hired Biden's son Hunter to consult, with compensation of $100,000 per year.

Many of the socioeconomic problems of America—deindustrialization, stagnant wages, low-savings rates, consumer debt—are driven, certainly enabled, by a banking system that sees subprime borrowers as their most profitable business sector.

China is often criticized because it has lower rates of consumption as a percentage of family income than the US. But China's consumer demand is mostly financed by wages or savings. The US system relies on consumer lending to drive both profits for the financial system and the overall consumption-driven economy.

Dan Wang's new book *Breakneck: China's Quest to Engineer the Future*[16] observes that China is dominated by engineers, while the US system is dominated by lawyers. That is true. But financiers may play an even bigger role in the US than lawyers. The differences in the two countries' financial systems are fundamental to determining how capital is invested and who gets most of the rewards.

Like the old New Deal system in the US, the Chinese banking system is designed to provide funds to infrastructure projects and to industry. The new post-1990s banking system in the US provides funds to sub-prime consumers and to risky

---

[15] U.S. Bureau of Economic Analysis, Personal Saving Rate [PSAVERT], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/PSAVERT, November 9, 2025.

[16] Dan Wang, *Breakneck: China's Quest to Engineer the Future*, New York, W.W. Norton and Company, 2025.

companies that have a chance of grabbing monopoly returns. The Chinese system supports companies and projects that need engineers of all types. The US system supports projects that need lawyers and finance guys.

Asset Price Bubbles

Stock price increases can be driven by three factors. First, an increase in the value of a company's stock could be a reflection of the increased productivity of the company. Second, prices could rise because the capital owners (stockholders) are able to take an increased share of total production away from workers, and, finally, the stock price could go up because of bubble factors— "irrational exuberance" or, more likely, loose monetary policy by the central bank.

A 2025 article in the prestigious *Journal of Political Economy* split the sources of the gains in the US stock market.

> Why does the stock market rise and fall? From 1989 to 2017, the real per capita value of corporate equity increased at a 7.2% annual rate. We estimate that 40% of this increase was attributable to a reallocation of rewards to shareholders in a decelerating economy, primarily at the expense of labor compensation. Economic growth accounted for just 25% of the increase, followed by a lower risk price (21%) and lower interest rates (14%). The period 1952–88 experienced only one-third as much growth in market equity, but economic growth accounted for more than 100% of it.[17]

That is, in the era before the 1990s financial reform, all the price increases in the stock market reflected productivity increases. After those banking reforms, the biggest single factor, 40 percent, driving stock prices was redistribution from labor to capital. Only 25 percent was from productivity growth, and the remaining 35 percent were bubble factors.

Figure 2.4, on page 45, shows the history of stock prices in the US. They rose slowly until 1980, went up faster from 1980 to 1995, then they soared during three booms. The dot.com boom started in 1995 and collapsed in 2000. The housing boom and stock price increases again soared from 2001 to 2007 and collapsed in 2008. The third boom saw soaring stock prices and house prices from 2010 to the present. They have not yet collapsed as of 2025.

Stock prices, which are an indicator of returns to capital, rose much more steeply after the financial reforms of the 1990s than before. The new banking system requires rising asset prices and low interest rates to remain profitable. These asset prices are volatile because they don't reflect underlying productivity in the real economy.

Many Federal Reserve Chairmen have described their jobs as taking the alcoholic punch bowl away just as the party is getting good. In the new financial system

[17] David L. Greenwald, Martin Lettau, and Sydney C. Ludvigson, "How the Wealth Was Won: Factor Shares as Market Fundamentals," *Journal of Political Economy*, Volume 133, Number 4 (April 2025), abstract.

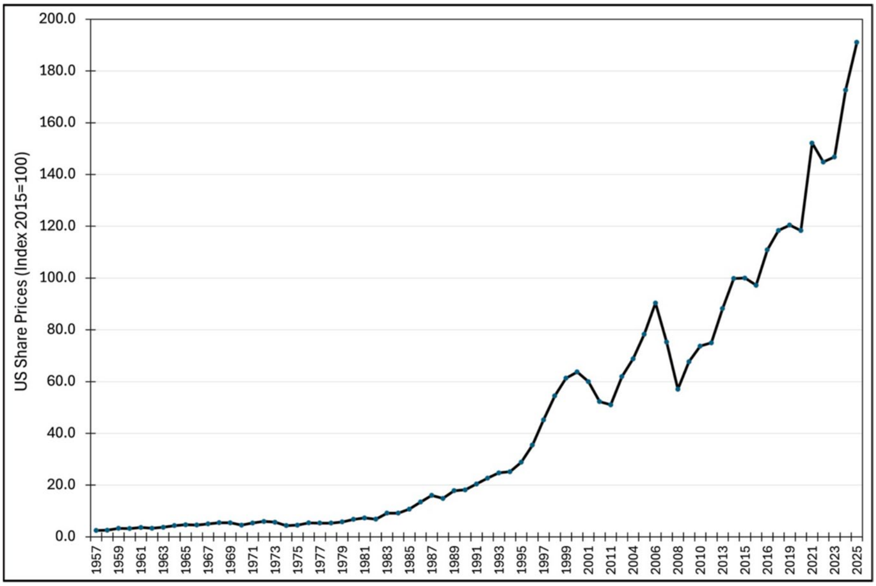

Fig. 2.4 US financial market share prices. *Source*: Organization for Economic Co-operation and Development, Financial Market: Share Prices for United States [SPASTT01USM661N], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/SPASTT01USM661N, March, 2026

of the 1990s, then-Chairman Alan Greenspan decided not to do this. The results were the dot-com bubble and crash from 1995 to 2002 and the housing bubble and crash from 2003 to 2010. It is hard to avoid the fear that the current rapid stock market rise, which started with the Fed's qualitative easing polices of 2009–2012, is also a bubble, maybe the largest in history.

Figure 2.5, at the end of this chapter, shows that US housing prices have followed a similar boom/bust pattern, even much more so than did Chinese housing prices. These are nationwide indices. Some cities in both countries experience more extreme shifts. China has had house price increases driven by partly by credit creation and partly by the lack of alternative investment venues for most households. But the rise is nothing like the steep bubbles seen in the US. As of late 2025, China has already experienced about a 20 percent drop from its peak of its housing market. The US prices have not yet fallen in either the housing or stock markets.

According to this index, Chinese housing prices rose from a cyclical low of 93.7 in 2015 Q1 to the high of 113.0 in 2021 Q2, a rise of 20.6 percent. From this peak, prices fell to 90.7 in 2025 Q2, back down to the level they were at in 2006 Q2. It looks like much of the Chinese housing price correction has already taken place, although prices could fall even further because of overbuilding of apartments.

US housing prices rose from a cyclical low of 94.0 in 2011 Q2 to a peak, so far, of 161.7 in 2024 Q4, a rise of 72 percent. US house prices have stagnated through

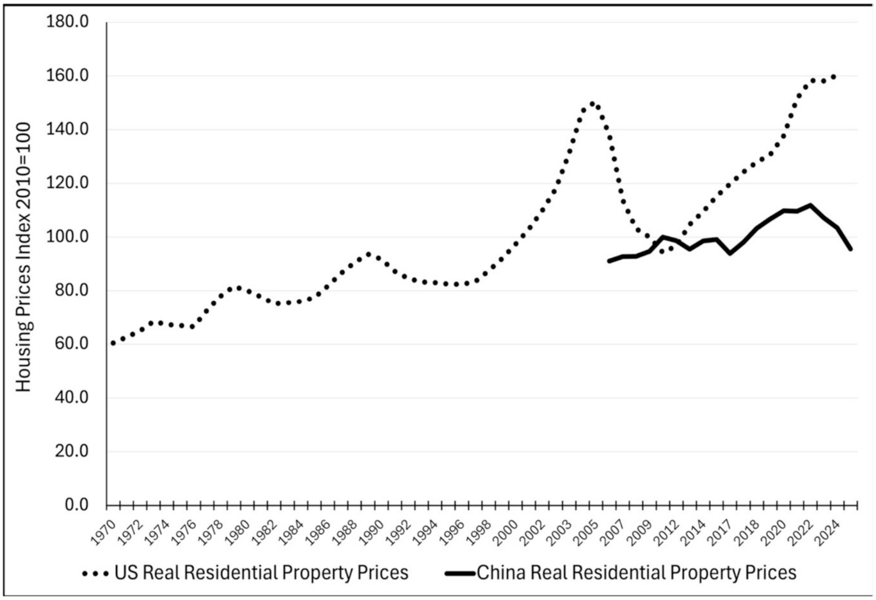

Fig. 2.5 Inflation-adjusted housing prices in the US and China. *Sources*: Bank for International Settlements, Real Residential Property Prices for United States [QUSR628BIS], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/QUSR628BIS. Bank for International Settlements, Real Residential Property Prices for China [QCNR628BIS], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/QCNR628BIS

2025, so it is likely that a large correction, on the same magnitude or larger than 2006 through 2011, can be anticipated.

Housing constitutes about 70 percent of household wealth in China, so the decline in consumption caused by this wealth effect will continue to be a drag on Chinese economic growth. In the US, housing constitutes 31 percent of household wealth and retirement accounts, which are largely based on stock prices, constitute another 34 percent. So, if the huge rise in house and stock prices we have seen since the quantitative easing of the early 2010s does in fact turn out to be a bubble, the effects on American economic growth could be enormous.

Many people are confused about the consequences of low interest rates. A friend of mine recently bought a house in Tennessee, where prices have risen dramatically. She was happy that she financed her mortgage at a low interest rate. She did not realize that the houses were so expensive precisely because of the Federal Reserve's low-interest rate policy.

I primarily studied macroeconomics and monetary policy in graduate school at UCLA in the late 1970s and yet I cannot recall anyone ever bringing up the distributional effects of monetary policy. The main goal of monetary policy was to prevent inflation or deflation and to prevent the overall economy from going into recession or depression because of insufficient aggregate demand. As long as the rate of consumer inflation remained low, the Fed concluded that credit creation was not too much. Asset price rises were not considered relevant to inflation.

After the global financial crisis of 2008, the Fed, led by Ben Bernanke and Janet Yellen, saw its job as restoring demand. Raising the prices of assets—stocks and houses—was the goal. Instead of reforming the financial system, the Obama administration and the Fed decided to create more money. The huge boom shown in Figs. 2.4 and 2.5 was the result.

Thomas Hoenig, President of the Kansas City Federal Reserve Bank, was the lone dissenter against quantitative easing at the top ranks of the Fed. He argued that QE would be just doubling down on the policies that led to 2008. In his book, *Lords of Easy Money*, Christopher Leonard summarizes Hoenig's thoughts. More prescient words have seldom been written:

> Hoenig was fighting against quantitative easing because he knew that it would create historically huge amounts of money, and this money would be delivered first to the big banks on Wall Street. He believed that this money would widen the gap between the very rich and everybody else. It would benefit a very small group of people who owned assets, and it would punish the very large group of people who lived on paychecks and tried to save money. Just as important, this tidal wave of money would encourage every entity on Wall Street to adopt riskier and riskier behavior in a world of cheap debt and heavy lending, potentially creating exactly the kind of ruinous financial bubble that caused the Global Financial Crisis in the first place.[18]

Even though most of the returns to the resulting boom have gone to people who were already rich, many average Americans and Chinese, especially older people, have benefitted substantially from these asset price increases, at least on paper. In the US, retirement savings accounts have surged and selling an appreciated house provides a nice windfall to many retiring couples. But about 70 percent of all earnings generated from owning assets now go to the richest 1 percent, up from 35 percent in the late 1970s.[19]

The consequences for younger people have been dire. Before the recent decline in housing prices, entrepreneurs in Beijing complained that they would have been better off buying an apartment in 2010 than investing in starting a company. In both countries, high housing prices make it very hard for young people, who are discouraged from taking risks. Large cities which should give opportunities to dynamic young people are instead discouraging them. Mayor Bloomberg's claim that "New York is a luxury product" showed a disdain both for working people and for young people.

In the long run, lower housing prices would improve the lives of average people and will encourage innovation and productivity. People wouldn't have to worry so much about getting a reasonable place to live, so both countries would be better off

---

[18] Christopher Leonard, *The Lords of Easy Money: How the Federal Reserve Broke the American Economy*, New York, Simon & Schuster, 2022, p. 9.

[19] Matthew C. Klein and Michael Pettis, *Trade Wars are Class Wars: How Rising Inequality Distorts the Global Economy and Threatens International Peace*, New Haven: Yale University Press, 2020. p. 177.

if these housing price surges had never occurred. Chinese people now have by far the best housing they have ever had, but the prices are too high.

In their intriguing book, *Boom: Bubbles and the End of Stagnation*, Byrne Hobart and Tobias Huber distinguish between mostly beneficial "inflection-driven bubbles" and mostly harmful "mean reversion bubbles."[20] Inflection-driven bubbles are a race to produce a new type of asset, often a new technology, which will increase productivity in the real economy. Too many people may jump in the race so that profits fall, but the race itself creates lots of the new asset and thus benefits society. On the other hand, mean-reversion bubbles are driven by financial speculation, usually created by monetary expansion, and do not create new real assets.

For example, the "overinvestment" in fiber optic cable during the dot-com bubble of 1995–2000 did produce a very extensive real asset of telecoms capacity. Society benefitted even though the investors lost a lot of money. On the other hand, the increase in American stock prices and housing prices from 2012 to 2025 looks like a purely mean-reversion bubble created by the Fed's quantitative easing. What real assets were created in this process?[21] We don't know yet whether the current boom in AI will be a productive or unproductive bubble.

China's housing bubble may well have been created by a new real demand for and availability of housing. Because many investors and, in this case, prospective homeowners had a fear of missing out, too much capital flowed into the sector and prices had to fall. But Chinese society can potentially reap the benefits of having easily available, cheap, and reasonably high-quality housing. This could benefit average people by making housing cheap and also could encourage potential entrepreneurs, especially young people, to take a risk on their dreams. The problem is that a large part of on paper Chinese household wealth is tied up in housing and there will be a large shock to the economy as the net worths of average people decline.

As Keynes said, "in the long run, we are all dead." Getting out of the current mess will be hard for both countries over the next decade. China's policies of (1) encouraging technology investments that increase productivity and (2) promoting prosperity and productivity in smaller cities and rural areas could be transformative if the shorter-term shocks of the coming years can be endured.

The US is taking some tentative steps toward resurrecting manufacturing and raising wages, but there is a long way to go. I fear that policymakers will just try to double down by using very loose monetary and fiscal policy to try to stimulate another unsustainable and unproductive boom without implementing fundamental reforms.

---

[20] Byrne Hobart and Tobias Huber, *Boom: Bubbles and the end of Stagnation*, San Francisco: Stripe Press, 2024.

[21] See the excellent discussion at "The Benefits of Bubbles," *Stratechery* by Ben Thompson, https://youtu.be/IplmaMf1xMU?si=jZ6OJab4o399aViW.

America's Wealth Illusion Caused by the Special Global Role of the Dollar

A 2023 article in *The Atlantic* magazine asked the question: "Is Mississippi really as poor as Britain"?[22] The author asserted that Mississippi, America's poorest state, should be insulted by the comparison. In 2025, Newsweek reported that Mississippi has a higher per capita income than any country in the EU, except Luxembourg.[23] There are many similar claims in the press and in academia.

With all due respect to Mississippi and recognizing the manifold problems facing European economies, that is complete nonsense. This is just a reflection of the wealth illusion created by the reserve currency role of the dollar and is not indicative of real wealth.

The demand for the dollar, and therefore the dollar exchange rate with any other currency, is primarily driven by the use of the dollar in financial transactions, often very short-term transactions. Unlike other currencies, the value of the dollar is not determined by the need to pay for traded goods. And the dollar does not reflect relative standards of living among the two countries.

As I argued in Chap. 1, the dollar exchange rate or even purchasing power parity comparisons of US and Chinese quality-of-life greatly undervalue the Chinese quality of life. My rough estimate is that a person earning 5000 RMB per month in China has the same, or perhaps better, quality-of-life as a person earning $3000 per month in the US—implying a quality-of-life US/China exchange rate of roughly 1.6 Dollars/RMB—far different from the current market dollar/rmb rate of slightly more than 7.

Many people would like to blame China for this disparity. But it is not caused by any Chinese policy. As long as the special role of the dollar continues, the standard of living of American workers will be grossly overestimated relative to workers in other countries and American exports will be so expensive in local currencies as to be uncompetitive. The role of the dollar is certainly good for large American banks and for American multinationals who can buy foreign labor cheaply, but it has been a tragedy for American workers and the middle class.

As Beijing University professor Michael Pettis has shown in his prolific works, the US current account deficit is not driven by trade policy, tariffs, the WTO and so forth.[24] As long as the US has a low savings rate (that is, aggregate saving is less than aggregate investment), then the US will need to borrow from foreign countries to pay for the needed imports of capital equipment (or consumer goods displaced by

[22] Douglas Carlswell, "Is Mississippi really as poor as Britain?," *The Atlantic*, August 18, 2023.

[23] Suzanne Blake, "Are people in Mississippi really richer than people in Europe?, *Newsweek*, April 30, 2025. https://www.newsweek.com/are-people-mississippi-really-richer-people-europe-2066233.

[24] Matthew C. Klein and Michael Pettis, *Trade Wars are Class Wars: How Rising Inequality Distorts the Global Economy and Threatens International Peace*, New Haven: Yale University Press, 2020, p. 176.

American investment goods). As was shown above, the savings decline was caused by the immiseration of the working and middle classes. Despite attempts to eliminate it with tariffs, the current account deficit will continue as long as the current financial system and the strong dollar continues. For this reason, I believe that one goal of President Trump's policies is to weaken the value of the dollar.

Ironically, the use of the dollar and the US financial system as a weapon of foreign policy may well achieve the goal of balancing US trade. The value of a financial system is that it is seen as unbiased and reliable. Any country that has been subject or might be subject to US financial sanctions has a strong incentive to find an alternative to reduce their vulnerability. It is not tenable that the world reserve currency can be used as a weapon against major economies.

Curtailing the reserve role of the dollar would be good for average American people in the long run. American exports would be more competitive, so worker salaries could rise. The American government has a strong comparative advantage at creating debt and has taken full advantage of that opportunity. If the dollar becomes a normal currency, the government would no longer be basically unconstrained by a very soft budget constraint. And real interest rates would rise to reward savers—encouraging investment in the real economy and discouraging speculators.

The problem is that the patient may not survive the treatment. The shock of losing the dollar's reserve currency role and making needed reforms in the financial system would be so large that the US economy might take a very long time to recover from the resulting depression.

China may well be in a better place to weather the storm of transition because its mostly state-owned banking system cannot collapse as private banks can. If the Chinese government needs to stabilize a bank, it can transfer funds to the bank in the same way that Premier Zhu Rongji did in the 1990s. This is simpler in China because the state is bailing out its own agency.

Furthermore, China's overall strategy of increasing supply to make life cheaper for ordinary citizens is not based on high profits for either producers or banks. Essentially, China is allowing competition to force profits low, which benefits everyone else in the system. The boom of the past decade did create a lot of real housing, infrastructure and manufacturing assets. So, a period of deflation and involution should raise consumption plus force stiff competition in all sectors—exactly what a competitive market economy should do. This is only possible because the Chinese financial system is focused on making investments in the real economy, rather than seeking fees or monopolistic returns.

Chapter 3
The East Asian Development Model: Savings and Investment, Competition, Rapid Wage Increases

The World Bank identifies 13 economies that have grown at an average rate of 7 percent per year or more for 25 years or more. Excluding city-state economies (Hong Kong, Malta, Singapore) and those with a very high ratio of natural resource income to population (Botswana and Oman), we can compare the high growth periods of Brazil, China, Indonesia, Japan, South Korea, Malaysia, Taiwan (China), and Thailand.

China, Japan, South Korea and Taiwan (China), henceforth called the East Asian Development Model 4 (EADM4), all used a development model combining **very high savings/investment combined with the discipline of market competition in goods and services**. They all had very high real wage growth rates during their high real GDP growth rate periods. I've found no other large (non-city-state) countries where real wages rose rapidly, even during the highest GDP growth periods. As will be explained in Chap. 4 below, the rapid growth of real wages is a crucial part of this entire development model. ("Real" means adjusted for inflation.)

This chapter looks at the data on real GDP and real wages of these countries during their high growth rate periods. The conclusion is that **high real GDP growth is sustainable only if it is accompanied by high real wage growth rates**.

The central argument of this chapter is that capital accumulation leads to sustainable real GDP growth only if it is accompanied by real wage growth *and* by market competition in the current goods and services markets. Countries can have short periods of GDP growth not accompanied by real wage growth, but they will be stopped by (1) the lack of aggregate demand, and (2) lack of pressure on firms to move to higher value-added products. This leads to a hypothesis:

Hypothesis: *High growth periods are sustainable only if they are accompanied by rapid real wage increases. A decline in the growth rate of real wages is the key leading indicator that high growth rates of GDP are becoming unsustainable.*

D. Blair, *How Nations Succeed*, China and Globalization,
https://doi.org/10.1007/978-981-92-2059-5_3

In her classic book on South Korean industrialization, Alice Amsden discusses the "paradox of unlimited labor and rising wages."[1] This paradox is also found during the high growth periods of China, Japan, and Taiwan, but not in other developing economies. This book proposes that the solution of the paradox is that high capital accumulation generated additional production. Government competition policies ensure that this additional production does not flow to capital owners as monopolistic returns, so it must flow to workers.

As we saw in the US case in Chap. 2, a country can have GDP growth without real wage growth. However, this GDP growth was driven by demand created by artificial monetary or fiscal stimulus, not by supply-side creation of real assets or real production capability. This leads to increased prices of already existing assets (stocks and houses) which creates inequality, impoverishing the middle and working classes. The US kept GDP rising only by increasing debt, inflation, and inequality.

The high growth periods of Brazil, Indonesia, Malaysia, Thailand, and many other countries were driven either by commodity booms or by inflows of foreign capital—both of which were created largely by monetary stimulus in the US or, later, by the rapid growth of China. In these countries, the rewards of the boom flowed to a rich elite, not to working people, so real wages were largely stagnant. These countries were unable to convert their high GDP growth rate spurts into improved living standards for most of their people.

In its very high growth period from 2000 to 2015, Chinese workers increased their real earnings by an astonishing 5 times. Real earnings almost doubled every 5 years. From 2015 to 2025, real earnings increased a further 80 percent. So, from 2000 to 2025, real earnings increased 8.7 times. From the start of reform and opening up in 1979, Chinese real wages have increased about 23 times. China's case is spectacular because it is so big and because it started from a near starvation level of income in the 1970s then dramatically transformed standards of living of average people within 40 years. China is unique in that it has been able to continue rapidly raising real wages for 40-plus years and counting. Even the other three EADM economies—Japan, South Korea, and Taiwan—only raised wages for shorter time periods before wages stagnated.

China is simply too big to rely on foreign capital, as South Korea did. Nor can it rely on export-market competition as did Japan, South Korea, and Taiwan. China had to accumulate its own capital and to structure its own economy to enforce competition. It accumulated capital mainly by so-called financial repression (using the banking system to encourage high savings rates), direct government investment in infrastructure and some industries, plus significant amounts of small business retained earnings. This was combined with strong antitrust policies that ensured domestic competition.

[1] Alice Amsden, *Asia's Next Giant: South Korea and Late Industrialization*, Oxford University Press, 1992, pp. 189–207.

Japan

Japan's period of high (above 7 percent) GDP growth extended from 1950 to 1972. GDP continued to grow at 4–5 percent per year in the 1970 and 1980s. Growth has been basically zero since 1990. As Fig. 3.1 shows, real wages soared faster than GDP from 1966 to 1978 and the labor share of GDP rose sharply. In total, real hourly earnings in manufacturing multiplied 11.7x from 1955 to 1978, a transformative change in the standard of living of Japanese workers. Real wages slowed after 1978 but rose a further 80 percent from 1978 to 1992. In total, real wages rose 21 times from their very low level in 1956 to 1992. They have been almost stagnant since. (Figure 3.1

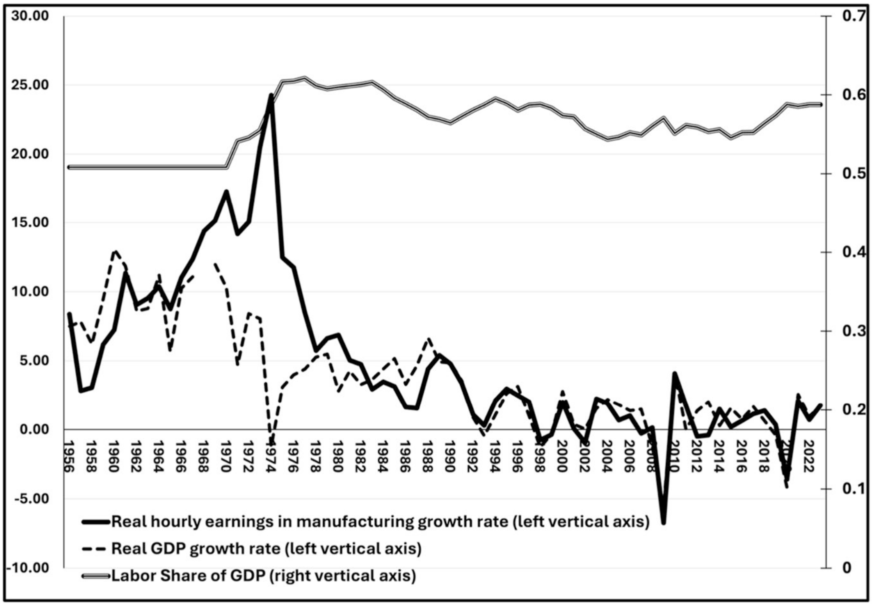

Fig. 3.1 Japan. Real wage growth rate, real GDP growth rates and labor share of GDP. *Sources for Japan*: University of Groningen and University of California, Davis, real GDP at constant national prices for Japan [RGDPNAJPA666NRUG], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/RGDPNAJPA666NRUG. Organization for Economic Co-operation and Development, Hourly Earnings: Earnings: Economic Activity: Manufacturing: Total Economy for Japan [LCEAMN01JPM661S], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/LCEAMN01JPM661S. University of Groningen and University of California, Davis, Share of Labour Compensation in GDP at Current National Prices for Japan [LABSHPJPA156NRUG], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/LABSHPJPA156NRUG, March 6, 2026. Wages are adjusted for inflation using the CPI for all items: Organization for Economic Co-operation and Development, Consumer Price Index: All Items: Total for Japan [CPALTT01JPM657N], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/CPALTT01JPM657N, March 10, 2026

uses "average hourly earnings in manufacturing" because the is the only relevant data set that goes back to the 1950s.)

Japan's early high growth period (1950–1978) resembled China in that it was high capital accumulation and high wage growth. From 1966 to 1978, real wages grew much faster than real GDP, but wages have closely tracked the much-reduced GDP growth rate since then. Thus, a real wage growth rate decline may be a leading indicator of a very deleterious shift in growth rate models. Japan's capital accumulation was financed primarily through financial repression, government directed investment and some small business retained earnings.

The large US recession of 1981–1983 followed by the 1985 Plaza Accords, which forced Japan to raise the value of its currency dramatically, destroyed the Japanese development model that had been based on exports to the US. That is, Japan was unable to continue the strategy of high investment, high real wage growth and using exports as a growth driver in the system. Japan was able to use highly expansionary monetary policy in the late 1980s to continue the illusion of growth for a few more years. This just succeeded in creating a very large bubble in the prices of stocks and real estates. After this bubble inevitably burst, even very large fiscal and monetary stimulus has been unable to create wage or GDP growth for more than 30 years.

This is a warning. By the late 1970s, Japan had reached the culminating point of its old business model of high investment, rapid export growth, and rapid increases in real wages. Japan was unable or unwilling to move to a new sustainable growth model.

South Korea

Figure 3.2, on page 55, shows that South Korea's real wages grew at about 7 percent per year from 1972, the start of President Park Chunghee's industrialization program, until 1997—roughly tracking GDP growth rates. This transformed the lives of average South Koreans. In this 25-year period, the average real wages of South Koreans multiplied 7x.

Looking at a longer period, Fig. 3.2 shows that the rise in South Korean wages was less dramatic but longer-sustained than happened in Japan. Except for the big US recession of the 1980s and the Asian financial crisis of 1997–1998, Korea was able to maintain GDP growth of 7–8 percent from the 1970s, 1980s, and 1990s. During most of this period, the growth rate of real wages was higher than the growth rate of GDP, so labor share rose sharply from a very low level of 40 percent in 1974 to almost 60 percent in 1995. After the Asian Financial Crisis, Korea has been able to maintain positive real GDP and real wage growth averaging 2–3 percent per year—not transformative, but better than Japan.

South Korea relied more on foreign loans for its capital accumulation than did the other EADM4 economies. Its economy was also more dominated by large monopolistic companies, so it relied more on government labor protection, rather

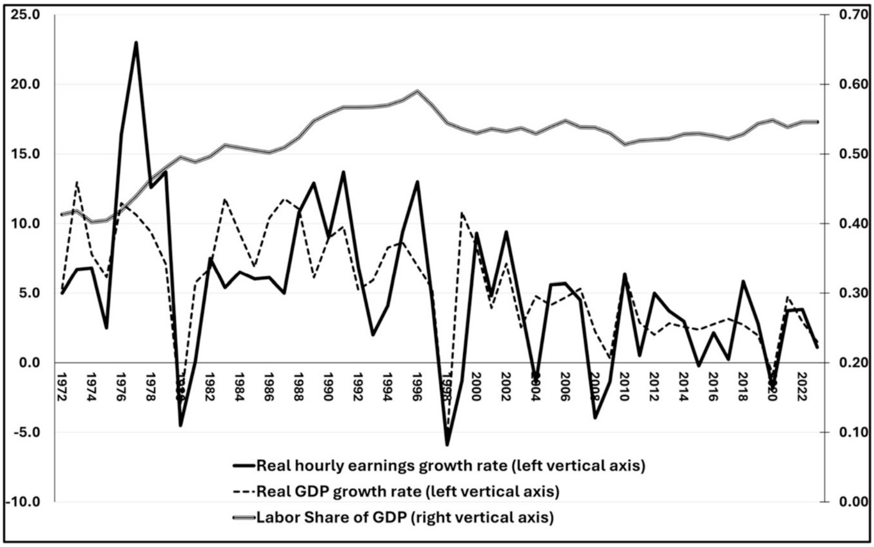

Fig. 3.2 Republic of Korea. Real GDP and real wage growth rates, labor share of GDP. *Sources for South Korea*: The data sources for real wage growth in South Korea are not continuous. For the earlier years, 1972–2005, I used data from Republic of Korea Department of Labor Occupational Wage Survey as reported in Kang and Yun and in Kim and Topel. In 1993 the OECD began reporting hourly earnings in manufacturing. From 2006–2023, this data set was used, adjusted for inflation using the GDP deflator. I have examined differences in the data sets and found no significant differences, except that the Occupational Wage Survey found that the high real wage growth rate periods ended earlier in 1994 and in 2003–2004 than is shown by the real earnings in manufacturing series. Real Wage Growth Rate 1972–1986: Dae-Il Kim and Robert H. Topel, "Labor Markets and Economic Growth: Lessons from Korea's Industrialization, 1970-1990," in Richard B. Freeman and Lawrence F. Katz, editors, Differences and Changes in Wage Structures, University of Chicago, 1995. www.nber.org/system/files/chapters/c7859/c7859.pdf. Real Wage Growth Rate 1986–1992: Byung-Goo Kang and Myeong-Su Yun, "Changes in Korea Wage Inequality, 1980–2005." Institute for the Study of Labor, Bonn Germany, Discussion Paper No. 3780, October 2008, p. 23. docs.iza.org/dp3780.pdf. Real Hourly Earnings Growth Rate 1993–2023: Organization for Economic Co-operation and Development, Hourly Earnings: Earnings: Economic Activity: Manufacturing: Total Economy for Korea [LCEAMN01KRQ661S], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/LCEAMN01KRQ661S, March 7, 2026. index 2015 = 100. University of Groningen and University of California, Davis, Share of Labour Compensation in GDP at Current National Prices for Republic of Korea [LABSHPKRA156NRUG], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/LABSHPKRA156NRUG, March 6, 2026. Real GDP Growth Rate: World Bank, Constant GDP per capita for the Republic of Korea [NYGDPPCAPKDKOR], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/NYGDPPCAPKDKOR, March 7, 2026

than competition, to ensure wage increases. Curiously, South Korean real wages have increased since the end of the Asian financial crisis, taking a larger share of GDP. Perhaps that is due to labor shortages or to government restrictions on the chaebol.

Taiwan (China)

The Taiwan economy also accomplished transformative increases in real wages. As Fig. 3.3 shows, real wages had a period of high growth from 1974 to approximately 1992. Most of the years in this 18-year period, real wages were growing faster than GDP. Real worker earnings in industry increased a multiple of 4.8x. Since 1995, Taiwan real wages have been almost stagnant. GDP has been rising faster than wages.

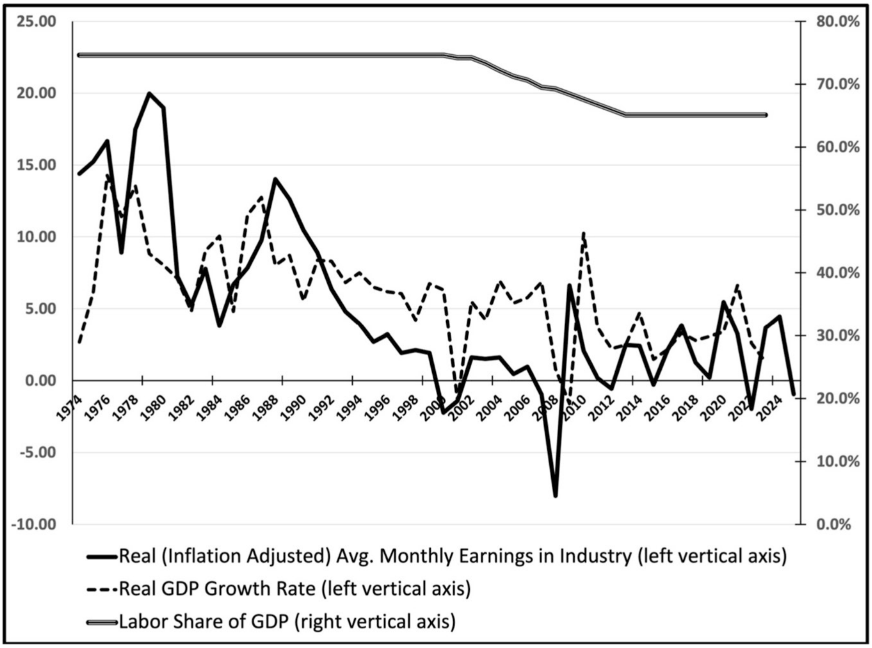

Fig. 3.3 Taiwan Province of China. Real earnings in industry and real GDP growth rates, labor share of GDP. *Sources for Taiwan*: Real GDP Growth Rate: University of Groningen and University of California, Davis, Real GDP at Constant National Prices for Taiwan Province of China [RGDPNATWA666NRUG], retrieved from FRED, Federal Reserve Bank of St.Louis; https://fred.stlouisfed.org/series/RGDPNATWA666NRUG, March 7, 2026. Labor Share of GDP: University of Groningen and University of California, Davis, Share of Labour Compensation in GDP at Current National Prices for Taiwan Province of China [LABSHPTWA156NRUG], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/LABSHPTWA156NRUG, March 7, 2026. Average Total Earnings in Industry: National Statistics Republic of Taiwan, Index of Average Total Earnings in Industry (2021 = 100). (https://earnings.dgbas.gov.tw/view_payroll.aspx). I also looked at the growth rate of household incomes and expenditure, from Taiwan government data sets. (https://data.gov.tw/datasets/search?qs=518). This growth rate is nearly identical to the growth rate of average total earnings in industry and made no difference to the analysis. The GDP deflator was used to adjust Total Earnings for inflation. https://tradingeconomics.com/taiwan/gdp-deflator

Not shown on the chart, because wage data is unavailable, is the Taiwan high GDP growth rate period from 1951–1973. Starting from a very low base, real GDP rose 8x in this 22-year period, but the number of employed persons slightly more than doubled, so GDP per worker went up a total of 3.92 times. Over the entire period from 1951 to 1992, Taiwan GDP rose almost 39x—GDP per worker rose 11.5 times.

The data on labor share of GDP in Taiwan looks iffy, but it does show a decline (from a very high level) starting in the late 2000s, indicating that GDP has been rising faster than wages. Perhaps this is due to the growth of TSMC.

Taiwan's economy has long been dominated by small businesses, so any wage increases are directly tied to productivity increases, so the GDP growth rates and wage growth rates move together. Taiwan's capital accumulation was financed partly by transfers from the US, in the early years, but mostly by retained earnings from small businesses and other domestic savings. So, government intervention to promote capital accumulation has been less important for Taiwan.

The EADM4 economies are of dramatically different size, so their dependence on domestic real wage growth also differs greatly. South Korea and Taiwan are relatively small economies, so they could depend on exports as a growth driver, not on domestic demand. The South Korean economy is not highly competitive internally, so government labor policy has been critical in ensuring that workers are able to get a significant share of any GDP growth. Taiwan relied on strong internal competition among small and medium sized businesses to ensure that workers receive a large share of GDP.

Japan is a larger economy which initially relied on exports as a growth driver. This was unsustainable because of political tensions with the US, its major customer. The strong wage increases during its high growth period were not sufficient to support strong growth once the old growth model collapsed.

China, on the other hand, is a giant economy. Despite its recent strong export success, such a large economy cannot continue to rely on export demand for continued growth. Sustainable growth in China will be made possible only by the continued increases in real wages. All four EADM economies have benefited from the benevolent cycle of capital accumulation plus competition, which leads to rising GDP and wages, which in turn leads to rising domestic demand and industrial upgrading. All four used this process to greatly improve the living standards of their working people. However, China is both the most reliant on this benevolent cycle and also is in the best position to continue the process.

Countries with High GDP Growth, But Not High Wage Growth

All the non-EADM4 high growth countries display a very different pattern. High growth rates were not accompanied by real wage increases so the general population did not benefit.

Even during its high GDP growth period in the 1970s, Brazil's real wage growth averaged only 2–3 percent per year and then real wages fell sharply after 1978.[2] In another relatively high growth period, from 2006 to 2011, GDP grew at an average rate of 4.4 percent per year—5.3 percent if we exclude the global recession year of 2009. That's not Chinese level growth, but it's not bad. The government was able to mandate a higher minimum wage, but average wages barely grew over the decade.[3] This period's relatively high GDP growth rate was due to a worldwide rise in commodities, mostly due to Chinese demand. The benefits flowed to already rich Brazilians, without benefiting working people.

All the growth in the Brazilian economy was captured by capital or commodity owners. This has obvious implications for inequality, but it is important to understand what this tells us about how the Brazilian growth model differs from the Chinese. First, Brazilian capital and commodity owners could not have captured these returns without anti-competitive monopolistic power. Second, the stagnant wages imply that there was no pressure for Brazilian firms to search for new higher-level products. Finally, since wages did not grow, aggregate demand to support domestic industries did not grow. The collapse of this Brazilian growth period was entirely predictable.

Mexico has not had extended periods of 7 percent growth in GDP per capita. But it has had steady (except for the 1980s) growth in its GDP per capita. In the early growth period of the 1970s and 1980s, little of the production increase went to wages. The early 1980s were even more disastrous for Mexican wages than for Brazilians.[4] Later, real wages did steadily increase recently, roughly doubling from 2002 to 2015. This was the period when the Mexican government has attempted to liberalize the economy by breaking up some monopolies and otherwise pushing for competition, so it may be on a growth path similar to the Northeast Asian economies, but at a slower rate with lower rates of capital accumulation. If Mexico could remove the criminal cartels, which both impede business and greatly reduce the life-quality of average citizens, it could be in a position to be the next economic miracle.

Malaysia, Indonesia, and Thailand each had 25 years or more of high real GDP growth rates and, at least in terms of GDP per capita, rose from poverty to become middle income countries. Since all three countries started reporting wages only in the 1990s, it is not possible to account in detail for the wages over their high growth periods, which were from the 1960s to the 1990s. But we can see that they now have much lower wages than China does and little of the economic growth has gone to workers. Plus they have invested less in quality-of-life infrastructure so their standard of living is even lower than the wage numbers suggest.

[2] Ibid., p. 196.

[3] Firpo, S. P., Portella, A. L. The labor market in Brazil, 2001–2022. IZA World of Labor 2024: 441 doi: 10.15185/izawol.441.v2, https://wol.iza.org/articles/the-labor-market-in-brazil/long.

[4] Amsden, op.cit., p. 196.

In 2025, Malaysia has a median monthly salary of RM2884, equivalent, using the exchange rate, to 687 US dollars or about 4800 Chinese RMB. In contrast, the Chinese median salary in 2024 was 8000 RMB per month, roughly $1100.[5] China had a mean monthly salary of 10,266 RMB, 1.28 times the median. Malaysia had a mean monthly salary of RM 6610, 2.3 times the mean, indicating that Malaysia directed a much higher portion of total wages to high income earners.

Since the 1970s, Malaysia has prioritized ethnic restructuring (transferring wealth from Chinese-origin to ethnic Malays), rather than high quality development or wage growth. The IMF says that the country has faced wage stagnation[6] and Bank Negara Malaysia (the central bank) states that "the core challenge is the pervasive and sustained divergence between labor productivity and real compensation."[7] The share of GDP going to employee compensation was only 32.4 percent in 2022, compared to about 59 percent in China.[8] The result is that the lives of Malaysian workers has not been transformed, despite reductions in absolute poverty.

Real wages for university graduates have *fallen* to roughly one-third of what they were in the 1980s, according to a report from Bank Negara former governor Tan Sri Muhammad Ibrahim. He said that nominal wages have risen slightly, not nearly enough to keep up with the annual 5 percent inflation rate. "In reality, wages have eroded at least threefold," he said. Adding that Malaysia has been stuck in a middle-income trap for years, with stagnant wages tied to multiple structural issues, including heavy reliance on low-skilled foreign workers, failure to generate high-quality jobs, and an outdated education and skills training system.[9] In short, despite a very long period of high growth, Malaysia has not been able to create a highly capable workforce or to develop the companies and clusters need to move into more technical or high value-added sectors.

In 2025, Indonesia's median monthly wage was about 4 million Indonesian Rupiahs, equivalent to 240 US dollars or 1700 Chinese RMB at the current exchange rate, and the mean was about 6 million, 359 dollars or 2560 RMB.[10] During its high GDP growth period, roughly from 1966 to 1997, the Suharto government deliberately kept wages low even during periods of productivity growth in order to transfer

---

[5] Beau Parrish, Average Salary in China: Local Data 2023 + 2024. TeamedUP China. https://teamedupchina.com/average-salary-in-china/.

[6] Muthi Samudram, "Chapter 5 Growth and Inflation in Malaysia," IMf eLibrary, June 24, 1996. https://www.elibrary.imf.org/display/book/9781557755421/ch007.xml.

[7] *BNM Annual Report 2013*, "Potential Impact of the Minimum Wage Policy on the Malaysian Economy," https://www.bnm.gov.my/documents/20124/830190/cp04_005_box.pdf.

[8] Samirul Ariff Othman, "Malaysia's Wage Crisis: Real Incomes Shrink as Structural Inequality Deepens," *DagangNews.com*. May 6, 2025. https://www.dagangnews.com/article/english-terkini/malaysias-wage-crisis-real-incomes-shrink-structural-inequality-deepens-51536.

[9] *New Straits Times*, "Malaysia's Real Wages Down Three-fold in Last 40 Years, says former BNM Governor," May 4, 2025. https://www.nst.com.my/news/nation/2025/05/1211265/malaysias-real-wages-down-threefold-40-years-says-former-bnm-governor.

[10] Remote People website, https://remotepeople.com/countries/indonesia/average-salary/#:~:text=The%20average%20salary%20in%20Indonesia%20is%206%2C000%2C000%20IDR,informal%20work%20sector%2C%20and%20a%20low%20minimum%20wage.

much of the nation's economic surplus to manufacturing firms. The development strategy was to accumulate capital by transferring resources from workers to capital owners. After the Asian Financial Crisis, the new Indonesian governments focused more on improving the lot of average people, but wages still remain low.

Real wages in Thailand have grown about 1.5 percent per year since the statistical agency began collecting data in 1999. In 2025, the "average" wage was 15,700 Thai Baht,[11] equivalent to 485 US dollars or 3450 Chinese RMB at current exchange rates.

Thailand had a very long GDP growth streak, with an average annual growth of 7.5 percent from 1960 to 1996, but little of this went to labor. The state provided companies with special monopolistic advantages but did not enforce technological improvement, industrial upgrading, or wage increases.[12] By allowing the monopolization of many sectors and the resultant stagnation of real wages, Thailand did not accomplish the kind of wage growth/industrial upgrading cycle that we saw during the high growth periods of the economies of Japan, South Korea, Taiwan and China.

Thai governments have recently focused on helping poorer people through transfer programs. This may further slow growth since it creates an entitlement mentality and traps many low-skilled people in near poverty while also further reducing the incentives for companies to upgrade their production.

Despite extended high growth periods, Southeast Asian countries and Brazil have not been able to escape their positions as low middle-income countries because their economic systems did not reward workers.

These same arguments apply to currently developed countries. During the 30 "glorious" years roughly from 1945 to 1975, the US and Western European countries saw both their GDPs and average real wages increase at a good pace. Since then, wages have been mostly stagnant. Not a good sign for the future.

China is still middle-income, but *high* middle income. If it can continue the policies that encouraged wage growth and industrial upgrading for another decade, it will clearly be a high-income country. As I argued in Chap. 1, the quality of life of average Chinese people already rivals or exceeds those of average people in high income countries.

The Northeast Asian EADM economies (China, Japan, South Korea, Taiwan) stand out in the post-World War II period for achieving long-term rapid growth rates that fundamentally transformed the standard of living of their peoples. A few authors contend that their achievement is just due to the application of free markets to previously closed markets[13] and it is certainly true that market allocation of goods and services certainly had were part of the reform processes.

---

[11] National Statistical Office of Thailand via TradingEconomics, https://tradingeconomics.com/thailand/wages.

[12] Pataratong Intarakumnerd, "Thailand's Middle-Income Trap: Firms' Technological Upgrading and Innovation and Government Policies," *Seoul Journal of Economics*, 2019, Vol 32, No. 1, pp. 107–135. sje.ac.kr/xml/26566/26566.pdf.

[13] See, for example, Ronald Coase and Ning Wang, *How China Became Capitalist*, Palgrave Macmillan, 2012.

There are two problems with saying it is primarily or only marketization that has led to their success. First, markets work because of competition, yet the competition is often eliminated by monopolistic companies if there are not strong government policies to enforce that competition. Second, markets in *capital*, as opposed to current goods and services do not lead either to efficient allocation of capital or to the accumulation of sufficient capital to transform a country. Capital owners, if left to their own incentives, will invest less in total than is socially optimal and will also direct those investments toward monopolistic sectors of the economy.

To solve this conundrum, the EADM4 developed governance systems and development models very different from the US or Western Europe. They did not follow the "Washington Consensus" formula of marketization, institution-building, and macroeconomic stabilization and they did not ***just*** eliminate all the failures shown in *Why Nations Fail*.

Bottom Line: The four EADM economies were the only large developing countries in the post WWII period able to achieve sustained, transformative growth that raised their populations from abject poverty to high or middle income. These were also the only large economies in which rapid wage rate increases were achieved during the high GDP growth period. This chapter argues that that is not a coincidence.

Chapter 4
Capital Accumulation: Market-Driven Monopoly vs Government-Enforced Competition

The Benevolent Cycle

This chapter outlines problems that must be solved by a government that attempts to use rapid capital accumulation to create long-term growth. It shows that market allocation of capital leads to lower than socially optimal levels of investment and directs capital to monopolies, so government intervention in the capital allocation system is needed to achieve the benevolent cycle:

Capital accumulation + competitive goods and services markets
➔rising real wages
➔industrial upgrading
➔capital accumulation + competitive goods and services markets
➔rising real wages and on and on.

To achieve this cycle, a country needs to solve four problems:

(1) Underinvestment in Developing Economies: There are high positive externalities to capital, particularly in the early stages of development. That is, private returns undervalue total social returns to capital. Furthermore, the private return to capital owners reflect primarily gains from monopolistic market structure. Therefore, any government that wishes to develop must find a way to incentivize high savings and investment. The Chinese government has accomplished this by using the state-owned banking system to incentivize high rates of savings which, in turn, make possible high rates of real investment.

(2) Disciplining Users of Abundant Capital: If a government succeeds in making abundant investment capital available, it needs to be sure that this does not just enrich a few monopolists or cronies or flow into unproductive companies. Since the Zhu Rongji reforms of 1998–2003, Chinese policy has done this by emphasizing domestic competition in most sectors of the economy. This differs from

D. Blair, *How Nations Succeed*, China and Globalization,
https://doi.org/10.1007/978-981-92-2059-5_4

Japan and South Korea, which largely disciplined firms through international competition.

(3) Forcing Firms to Move to Higher Value-Added Industries: China's competition policy has ensured that much of the returns to capital accumulation accrued to workers in the form of higher wages. As wages rise, firms are forced to move up the dynamic comparative advantage curve.

(4) Ensuring Effective Demand for the Products of Investment: China's policy of encouraging high wage growth is also central to ensuring the sustainability of high investment. Rapid wage growth leads to rapid consumption growth, so there is demand for the products produced by past investment.

Capitalism ≠ Free Markets

In common parlance, the terms "capitalism" and "free markets" are used interchangeably, as if they mean the same thing. That is highly misleading; the two are not the same thing and, in practice, they are often not compatible.

Capitalism more precisely defined is a system in which capital owners decide how capital is allocated. A free market, more precisely a free *competitive* market, is a system in which many producers compete for consumers and all use prices as a signal about what to produce and consume. All the economic proofs that market economies are efficient depend on the assumption that markets are perfectly, or, at least, highly competitive. A core dilemma of economics is that that very same theory argues that investment will not flow into companies in highly competitive sectors. Competitive market allocation of ***goods and services*** is socially and economically beneficial, but purely market allocation of ***capital*** is far from optimal.

Return to capital owners depends largely on the competition structure, the degree of monopolization, of the markets and may bear little relation, probably a negative relation, to the total societal return to capital. There is no reason to believe that the monopolistic companies that lure investments will be the place that yields the highest real production increase per unit of capital increase.

Businesses know this even though many economists ignore it. Michael Porter's five-forces diagram,[1] which is a core part of corporate strategy courses in any business school, is just a method of identifying potential sources of monopolistic profit. Almost every company uses Warren Buffet's concept of a "moat" to try to avoid price competition. But monopolies maximize their profits at levels of production and investment that are less than socially optimal.

That is, if capital owners decide how much and where to invest. They will (a) underinvest overall and (b) direct the investments toward companies that are trying to grab monopolistic returns.

[1] Michael E. Porter, "How Competitive Forces Shape Strategy," *Harvard Business Review*, 1979.

Early twentieth century Austrian economist Joseph Schumpeter emphasized the role of monopolistic returns in encouraging technical innovation. Similarly, famed Harvard Business School professor Alfred Chandler showed the importance of the lure of monopolistic returns (and economies of scale) for encouraging large companies to make the huge "bet the company" investments that transformed twentieth century America.[2] In some cases, it might be societally optimal to allow or even encourage monopolistic profits, which might be interpreted as just a return to risk.

Theoretically, the need for innovation, research, and risky capital investment can be a justification for allowing monopolies. But in fact, research at the National Bureau of Economic Research, discussed in Chap. 2 above, showed that almost all of the increased concentration in the US since 1990 has increased profits going to capital, not improved efficiency or increased innovation.[3]

Schumpeter also argued that markets will not allocate capital to highly competitive firms even in long established industries because profits will be bid down by competition, with most of the gains going to workers or consumers. That is, the theoretical justification for market allocation of goods and services is competition, but this same theory also predicts that capital will not be invested in competitive sectors.

A key problem of a poor country is how to build up their supply of investment capital that is needed to build infrastructure, factories, housing, and life-quality improvements for their people. Many countries around the world have tried to accumulate capital by either forced extraction of goods from citizens, farmers or workers, or by borrowing from abroad. But plans to transform an economy by rapidly accumulating capital have worked almost nowhere except in Northeast Asia.

If a country is to develop, it must find some way out of this dilemma. The four Northeast Asian economies (the East Asian Development Model 4—China, Japan, South Korea, and Taiwan province) have been most successful at creating systems that both encourage rapid capital accumulation and avoid the pitfalls of monopolization. Like all countries, they do have corruption—politicized business, and monopolistic inefficiencies—but they were successful at creating a system in which these problems have not become big enough to kill development and capital accumulation.

In all the EADM4 economies, fundamental transformation was accomplished by a combination of three policies:

(1) Government-controlled financial systems use so-called "financial repression" to ensure the *abundant availability of real capital*. This encourages high savings/investment rates and thus overcomes the market tendency to underinvest. This policy accumulates the capital needed for investment from citizen's

---

[2] Alfred D. Chandler, *Inventing the Electronic Century: The Epic Story of the Consumer Electronics and Computer Industries*, Harvard University Press, 2009.

[3] Matias Covarrubias, German Gutierrez, and Thomas Phillipon, "From Good to Bad Concentration? US Industries over the past 30 Years," *NBER Macroeconomics Annual*, Volume 34, 2019. https://www.journals.uchicago.edu/doi/full/10.1086/707169.

voluntary savings, not through extractions from farmers, by wage suppression or from foreign borrowing.

(2) Either domestic or international *competition* plus antitrust enforcement is used to discipline enterprises which otherwise might waste the abundant cheap capital. Competition also ensures that the returns to massive capital accumulation flow largely to the general public or workers, rather than to capital owners.

(3) Most importantly, the resulting *rapidly rising wages* have the dual effect of (i) assuring that there is future effective aggregate demand for the products of current investment and (ii) forcing enterprises to find ways to create higher-level products over time.

China has succeeded in continuing this strategy for much longer (45+ years and counting) than the other EADM economies. The story is not only massive investment. China ensured the accumulation of capital while also enforcing competition and ensuring that much of the newly created value flowed to workers and other ordinary citizens.

China's system was shaped to force highly competitive firms to learn rapidly and to improve their capabilities in manufacturing and technology. No other country can match China's mostly privately-owned industrial clusters that provide by far the deepest industrial supply system in the world. These clusters are competitive within themselves but also competitive across China and the world. Mostly, China does not "pick winners and losers," it instead invests in chosen sectors that the government decides might pay off in the future. It makes capital available in an industrial or technological sector and lets vicious competition pick the winners.

Capital Owners Will Seek Monopolization and Will Systematically Underinvest

Traditional microeconomic theories of capital investment are based on some version of the assumption that the rate of interest reflects the "marginal productivity of capital." That is, the interest rate equilibrates future production opportunities with consumer preferences between current and future consumption.[4] With very strong assumptions, models can be constructed that supposedly can calculate the optimal level of investment for a society. However, these models often assume a single "representative individual" who makes the optimal tradeoff for society. They often assume full information about future production possibilities. Thus, they just assume away the key problems of capital accumulation and allocation.

Of course, the models can be made more complicated by assuming future uncertainty, multiple types of capital goods, and/or imperfect capital markets. However, the assumptions required to calculate the optimal allocation of capital or the optimal

[4] My discussion of what I'm calling "traditional theories of capital investment" is based on Jack Hirschleifer, *Investment, Interest, and Capital*, Englewood Cliffs, NJ: Prentice-Hall, Inc. 1970.

level of savings and investment are so counter-factual that the conclusions of the models are unusable.

It is crucial to distinguish between return to capital and return to capital owners. Return to capital owners does not equate to the total marginal product of capital investment for society as a whole. Without government intervention, capital owners will systematically underinvest and, also, will direct their investment toward companies or industries with monopolistic returns. A key problem of development is to find a way to increase investment without, at the same time, creating all the potential problems caused by government allocation of capital.

Purely market determination of the level of savings/investment and of the allocation of capital is, both theoretically and practically, a bad idea for a poor country. Market allocation of capital will ignore the large externalities of capital creation and will also distribute capital to monopolistic firms, which are often crony capitalists. Putting resources into competitive markets is unattractive to capital owners because the returns to that investment will be bid down.

The lack of profitability of capital owners does not necessarily mean that the returns to society are not positive. For example, an excess buildup in an input industry may lead to increased competition and productivity in other sectors. Something like this happened with communications fiber in the US in the late 1990s and may be happening with many kinds of new technology in China today. Also, the jobs and other externalities created by these investments might be worthwhile to society even if the capital owners lose out.

The idea that there is too much investment in an economy implies that there is some determinable optimal level of investment. This chapter argues that there is no theoretical or practical way for making such a determination, but that there are good reasons to believe that market allocation of capital leads to sub-optimal levels of total investment.

Monopoly profits are maximized at less than economically efficient levels of production. Thus, monopolization reduces the amount of capital invested in the monopolized sectors. Developing countries need to see rapid growth in capital intensive upstream suppliers (for example, steel production, telecoms, or railroads) but monopolization of such sectors slows growth throughout the economy. The country needs to find a way to encourage massive capital accumulation in those sectors without allowing monopolization.

Joe Studwell has vividly described the effects of politicized capital allocation in Southeast Asia[5] and we have seen horror stories caused by industrial policies in many countries around the world. Most likely, policymakers' opposition to industrial policy is based more on this experience than on economic theory. Even so, countries still need to find a way to escape the problems that are caused by market allocation of capital.

---

[5] Joe Studwell, *Asian Godfathers: Money and Power in Hong Kong and Southeast Asia*, Grove Press, 2008.

Albert Hirschman, in his famous book on economic development, distinguishes between "social overhead capital," which he views as having numerous externalities, and "directly productive assets," which he views as having mostly private benefits.[6] Capital owners will ignore the social overhead capital.

Paul Romer's very influential model of economic growth[7] is based primarily on the idea that there are substantial externalities from research and development. Further theoretical and statistical research has supported the existence of such externalities.[8] There is also an extensive literature supporting the idea that investment in infrastructure creates extensive externalities,[9] especially in developing countries.[10]

Remarkably, there has been much less research on the externalities from equipment investment. However, DeLong and Summers conclude that externalities are 25–35 percent of the total return to investment in equipment.[11] This research looks at developed countries, so probably underestimates the externalities in developing countries.

It is clear that industrial investment in plant and equipment has had significant positive externalities—both for other companies in the area and for workers. Michael Porter has shown that creating industrial "clusters" is an integral part of economic development.[12] The co-location of companies in the same industry has been an important part of China's industrial success, especially in South China.[13] One company's investment will have positive externalities, even on its competitors within the cluster.

Perhaps more importantly, investment in plant and equipment makes it possible for workers to find jobs and build human capital in new industries. As the companies invest more, workers "learn by doing" and are thus able to prepare for new, higher value positions. This positive loop is key to the kind of national search for new types of comparative advantage emphasized by Justin Lin.[14] Market forces will ignore these externalities and thus will underinvest.

---

[6] Hirschman, Albert O. (1958), *The Strategy of Economic Development*, New Haven: Yale University Press.

[7] Paul. M. Romer, "Increasing returns and long-run growth." *Journal of Political Economy* 94 (1986), 1002–1037.

[8] For a good survey of the literature on the externalities from R&D, see Peter J. Klenow and Andres Rodriguez-Clare, "Chapter 11: Externalities and Growth," in Philippe Aghion and Steven N. Durlauf, *Handbook of Economic Growth, Volume 1A*, Elsevier 2005.

[9] Edward M. Gramlich, "Infrastructure Investment: A Review Essay," *Journal of Economic Literature*, Vol. XXXII (September 1994), pp. 1176–1196.

[10] Charles R. Hulten, "Transportation Infrastructure, Productivity, and Externalities," Paper prepared for the 132nd Round Table of the European Conference of Ministers of Transport, at the Joint OECD/EMCT Transport Research Center, Paris, France, December 2 and 3, 2004.

[11] J. Bradford DeLong and Lawrence H. Summers, "Equipment Investment and Economic Growth," *The Quarterly Journal of Economics*, Vol. 106, No. 2 (May 1991), 445–502.

[12] Michael Porter, *The Competitive Advantage of Nations*, New York: The Free Press, 1990.

[13] Michael J. Enright, Edith E. Scott, and Ka-Mun Chang, *Regional Powerhouse: The Greater Pearl River Delta and the Rise of China*, Singapore: John Wiley & Sons (Asia), 2005.

[14] Justin Yifu Lin, *Demystifying the Chinese Economy*, Cambridge University Press, 2011.

China has used its state-managed financial system to create massive savings and investment while substantially overcoming the problems of traditional industrial policy. This system solves the underinvestment problem without causing even worse problems due to political or corrupt misallocation of resources. This investment-intensive strategy has worked only because it has been combined with interventionist antitrust policies that have forced many sectors of the economy to be highly competitive. This competition ensures that most of the increase in production results in increased wages, not monopolistically high returns to capital owners.

There are four possible problems created by government policies designed to encourage high savings/investment rates: (1) too low future income to support current investment could lead to a Keynesian shortage of demand, (2) excessively high capital for the development level of the country could lead to production of goods not suitable to the country's comparative advantage, (3) misallocation of that capital among alternative uses could lead much of the capital to be wasted, and (4) low returns to private capital owners could lead to unsustainable debt. We now turn to how China has dealt with each of these problems.

Financial Repression vs Loose Money

Both China and the US have had low-interest-rate regimes since around the year 2000. Though superficially similar, it is crucial to clearly distinguish between them. The two economies have taken very different paths. China has had high savings, high capital accumulation, and high real wage rate growth. The US has had low savings and very low real wage rate growth. Why such a difference?

In China, the government used its control over the banking system to mandate that interest rates, the returns to savings, are low. This is usually called "financial repression," though I don't like the term since it wrongly sounds nefarious. This is a supply-side strategy that increases the amount of real resources available for investment.

Ordinarily, lower prices for a good will lead to less supply of it. But savings rates are driven by many factors and often move the opposite of normal goods. Lower long-term interest rates paid on savings can lead to more total savings because households have a target savings goal. A lower rate of interest makes it harder to reach that goal, so real savings goes up, making more real assets available for real capital investment.

During their heydays, each of the EADM4 economies used the financial suppression supply-side strategy. Under the New Deal, the US banking system did exactly the same—US law mandated that no interest could be paid on checking accounts. Capital growth created more production and competition ensured that this production flowed to the general public in the form of higher wages that, in turn, ensured adequate demand for the product of the investment.

A regime of low interest rates created by excessive monetary liquidity is fundamentally different. To lower interest rates, the US Federal Reserve and other Western central banks just issue more credit. No real assets are directed specifically toward investment. This is an "aggregate demand side" monetary policy, which creates liquidity but not real savings and thus does not lead to capital accumulation. The purpose of this US policy is to stimulate consumption—a demand-side strategy. The major effect of soft money in the US for the last 25 years has been asset appreciation. As Chap. 2 showed, in the first half of the 2000s, we saw housing appreciation. Since 2010, the liquidity has gone into stock price appreciation and houses.

In the US, financial firms find that their most profitable activity is redirecting savings from net savers to net consumers. Commercial banks make large profits by making consumer loans to not-quite-delinquent borrowers. This yields far higher interest rates and fees than they can obtain by making investment loans to businesses. So, net savings is reduced by the widespread availability of consumer credit. Furthermore, in a system where wages are stagnant, easy consumer credit is the critical source of demand. This financial system transfers some people's savings to others' current consumption, drives down the rate of savings and, therefore, reduces capital accumulation.

Since the current US financial system mostly redistributes savings to other consumers, the growth of productive capacity slows so there is little growth that could be distributed as rising wages even if monopolistic power could be overcome. In the US system, liquidity is used to buy appreciating already existing assets, not to create additional capital.

A system in which interest rates are manipulated by central bank liquidity injections, using instruments that would have been considered bizarre a few years earlier, is no more "free market" than is the Chinese system in which the central bank mandates low interest rates.

Research on international cross-sectional data does conclude that financial repression and other financial distortions usually results in lower economic growth rates.[15] But, that is not true in the EADM four economies, which had high growth rates and financial repression. Were they able to achieve high growth rates because of the financial repression or despite it? How can a distortive system be beneficial for economic growth?

In the Chinese system, the abundant cheap capital generated by low interest rates on deposits is used to create new productive capacity in the form of factories or infrastructure. Some has been directed to new housing, much of which was badly needed.

One might think that oligopolistic, government-owned banks in China would take for themselves the returns to capital, but it does not appear that Chinese banks have been excessively profitable.[16] Directing cheap capital to SOEs does gives them

[15] Nouriel Roubini and Xavier Sala-i-Martin, "Financial Development, The Trade Regime, and Economic Growth," NBER Working Paper 3876, October 1991.

[16] See Omar Massod and Bruno S. Sergi, China's Banking System, Market Structure and Competitive Conditions, *Frontiers of Economics in China* 2011, 6(1): 22–35. https://link.springer.com/article/10.1007/s11459-011-0120-x.

an advantage over private firms and does cause efficiency problems,[17] but many SOEs are either utilities or upstream suppliers of industrial inputs. So, low prices of their products will enable productivity throughout the economy. Furthermore, in developed countries small entrepreneurial companies are not usually funded by banks, either.

Without real wage growth, central banks have tried to use monetary liquidity to stimulate aggregate demand, but this credit-driven demand will eventually fail if real incomes do not rise to justify it. In a system with high wage rate growth, consumer credit is not so much needed to create demand.

In the US now, about 50 percent of consumption is done by the top 10 percent richest households that have benefitted hugely from the asset price increases since 2010. Returns to capital owners or rent-seekers will often be spent on (often foreign-produced) luxury goods or on assets, so they do not support general aggregate demand. Low median wage growth reduces the demand for domestically produced consumption goods.

The Japanese experience is a warning. In the early 1980s, Japan switched from supply-side investment-driven growth to demand-side liquidity-driven growth. As we have seen (See Fig. 3.1), rapid real wage growth stopped almost immediately, but monetary and fiscal stimulus allowed GDP growth to continue until 1988. The liquidity-driven growth flowed to rentiers in the form of rapid asset price rises, particularly in land. Of course, such an asset price bubble has to end if it is not supported by rising incomes. Japan's history indicates that a decline in real wage growth rates is a leading indicator of problems to follow.

This capital accumulation strategy failed in many countries around the world but succeeded in the EADM4 economies because they each used an integrated system: Government-mandated low financial interest rates led to very high saving rates and rapid capital accumulation. Without such a system for strongly encouraging real savings, markets will lead to sub-optimal levels of investment because capital owners ignore positive externalities and search for monopolistic returns.

In the EADM4, government-enforced high levels of economic competition both disciplined the firms that received the capital and ensured that much of the increased production flowed to workers, not capital owners. Industrial policies and forced capital accumulation usually fail, but the EADM economies were different in that they stressed international and, in the case of China, domestic competition. Without competition, there is no way to weed out bad firms; returns will go to cronies and capital owners. Competition ensures that high GDP growth results in rapidly rising wages. This both ensures adequate aggregate demand and forces firms to search up the dynamic comparative advantage curve for products with higher value-added. If any of these steps is missing, the model falls apart.

Obviously, this model has implications for Chinese economic policy going forward. Many well-meaning economists recommend that China "free" its financial

[17] Bo Hu, "Financial Repression and Interest Rate Liberalization in China," Indiana University, April 2014.

system and move from investment-led growth to consumption-led growth. China's model of growth up to this point has been "supply side" in the sense that its financial structure is set up to encourage a rapid growth of production capability. The competition-enforced growth of real wages ensured adequate "demand side" of the equation and, as we will see below, led to a rapid growth in consumption. A recommendation that China now fundamentally change its financial system is, in essence, asking that the economy move to a "demand side" financial emphasis, as was done in the US in the 1990s or Japan in the 1980s.

Is China Under-Consuming/Over-Investing?

The EADM4 high-growth economies are frequently criticized for emphasizing "too much" investment and too little consumption. China saves 40 to 45 percent of its total GDP, much more than the US, which saves about 22 percent. Looked at another way, the US now consumes 68 percent of GDP, up from about 60 percent in 1950–1980, which were the golden years for the American working and middle classes. China consumed 56 percent in 2024 up from the low of 49 percent in 2010. The Chinese consumption percentage is now in line with other East Asian countries. Are China's relatively low levels of consumption as a portion of GDP a good thing or a bad thing? Are America's high levels of consumption a good thing?

A common critique is that China is overinvesting or, which is the same thing, underconsuming. The most common policy recommendation is that China needs to transform its economy to be more consumption oriented.[18] A common view from Western economists is that China's development model devotes too many resources to investment.[19] Of course, anyone who argues that consumption is too low must argue that investment is too high. This assertion implies that there is some optimal level of consumption and that China is far below it. However, we have seen above that there is no theoretical model for reaching this conclusion.

The rapid rise of American consumption has been made possible only by reliance of average people on consumer credit—car loans and credit cards—and by the redistribution of income toward the richest top 10 percent. China has relied much less on consumer credit but has instead increased real wages. There is a big difference between credit-financed consumption, which is ultimately not sustainable, and wage-financed consumption, which is sustainable because average people are better off.

---

[18] The World Bank and the Development Research Center of the State Council of the People's Republic of China, *China 2030: Building a Modern, Harmonious, and Creative Society*, The World Bank 2013.

[19] For an example of this argument, see Nouriel Roubini and Adam Wolfe, "China is headed for a financial crisis and a sharp slowdown," in Fan et al. (2014), *The Oxford Companion to the Economics of China*, Oxford University Press, pp. 212–216.

Despite low returns on their savings deposited in state-owned banks, the entire system makes high savings rates collectively rational for China's population. Let's look at the investment opportunity they faced. Suppose Individual C were to be offered an opportunity to invest 50 percent of his income in exchange for a 10 percent permanent increase in his wages. (For example, an individual with wages of 100,000 RMB/year could invest 50,000 RMB to receive a permanent increase in his income to 110,000 RMB/year. This means that he could consume only 50,000 RMB in the first year.) That deal amounts to a 20 percent real rate of return on the investment. Then, the individual could be offered the same deal the next year, leading to another 10 percent increase in wages. By the seventh year, consumption in this high savings deal would exceed income in the first year and then would continue to grow. Except for very poor people who could not forego consumption, almost any investor would see this as a good deal. One way to think about the Chinese growth model is that this deal was collectively available to the Chinese citizenry. Of course, this high return to capital can't continue forever, but this process is the key to transformative economic development.

More practically, Chinese real wages grew at an average of 13 percent per year for 11 years (1998–2009) and 8 to 9 percent per year from 2009 to 2021. Both real wage growth and GDP growth have been slower since the pandemic. Chinese consumer spending rose from 4.74 billion RMB in 2000 to 53.9 billion RMB in 2024.[20] Adjusted for inflation, this amounts to a real increase of 7.4 percent annually over 24 years. It is hard to imagine total consumption rising faster than that. Is it really plausible that this is just the random result of an unbalanced development model[21]?

In China the debt built up since 2000 has gone to finance construction of needed basic infrastructure, housing, industry and technology. Most of the massive US debt has financed either private or government consumption (mostly rising healthcare prices and wars). The result is that China has created a huge number of productive assets. Some of these—parks are a good example—may not generate revenue but have much improved the life quality of citizens. The US has little to show for all the debt.

Was Chinese Capital Misdirected?

Traditional discussions of what a country should produce are based on Ricardian comparative advantage, which sees industry location as primarily a result of natural resource factor endowments. But, in a modern economy with global trade, the location of many industries, especially high value-added industries, is seldom determined

[20] World Bank via TradingEconomics, https://tradingeconomics.com/china/consumer-spending.

[21] See Lant Pritchett and Lawrence Summers, "Asiaphoria Meet Regression to the Mean," Federal Reserve Bank of San Francisco, Asia Economic Policy Conference, November 6, 2013. http://www.frbsf.org/economic-research/events/2013/november/asia-economic-policy-conference/program/files/Asiaphoria-Meet-Regression-to-the-Mean.pdf.

by the location of natural resources. A country that bases its economy on its current factor endowments cannot attain sustained growth. In Joseph Stiglitz' words:

> What matters is dynamic comparative advantage, or comparative advantage in the long run, which can be shaped. Forty years ago, South Korea had a comparative advantage in growing rice. Had it stuck to that strength, it would not be the industrial giant that it is today. It might be the world's most efficient rice grower, but it would still be poor.[22]

Justin Lin argues that capital accumulation is critical:

> (T)o upgrade the (industry and technology) structure and ensure maximum efficiency, the cause—the factor endowment structure must be changed….The major difference comes from capital accumulation. For some countries, the rate is as high as 30–40 percent, but for others, it is less than 10 percent. So, upgrading the endowment structure refers to increasing the relative abundance of capital.[23]

This is certainly a key part of the development process. But policies to encourage capital accumulation are not enough. Competition ensures that much of the total return to this capital goes to workers. Then, the rising wages force firms to search for new capabilities that can utilize both more capital and more highly-valued workers. The capital makes it possible for workers to obtain the "learning by doing" skills that increase their productivity. This interaction between wages and capital is what has driven the unique and transformative growth in China and the other EADM4 economies.

Many developing countries used highly directed industrial policies and many have intervened strongly to increase capital accumulation. Except for the EADM4, industrial policies around the world have been abject failures. Many countries just created bloated, inefficient, crony-capitalist companies. Import substitution policies were an attempt to just transferred resources from consumers to local producers, often politically favored local producers.

Japan and South Korea used international competition as a way to force the users of capital to be efficient. Since China is a much larger country, it has been able to use domestic competition for this purpose. This competition means that company profit margins are pushed to competitive levels, so the product of the new capital is returned to workers instead of capital owners.

All the EADM4 economies used competition to discipline capital recipients, but the industrial policies of the Northeast Asian economies have been quite different from each other. Japan's industrial investments were determined by an interaction of large industrial conglomerates, banks, and a very influential bureaucracy. In the Japanese system, the government made key decisions about investment direction, but there are numerous examples, especially in the automobile industry, where companies defied the plan.

---

[22] Joseph E. Stiglitz, "From Resource Curse to Blessing," *Project Syndicate*, August 12, 2012. http://www.project-syndicate.org/commentary/from-resource-curse-to-blessing-by-joseph-e%2D%2Dstiglitz.

[23] Justin Yifu Lin, *Demystifying the Chinese Economy*, Cambridge University Press, 2011. Kindle edition, loc 2112.

South Korea's early industrial planning was highly directive and was under the personal command of President Park Chunghee.[24] He monitored the international competitiveness of large companies daily—the laggards lost their capital and, sometimes, went to jail.

China has focused a lot less on highly directed "picking of winners," but has instead focused on making capital abundant in chosen sectors while enforcing competition within those sectors. A lot of Chinese growth is self-financed small entrepreneurs. Much of China's success is based on clusters of private sector suppliers and producers focusing on one type of product. China's upgrading depended on these companies learning to make more complicated and technologically advanced products. China is the most "free competitive market" of the three.

Unlike most developing countries, China did not rely on turn-key investments by large foreign multinationals. My fear is that a lot of the investment the Trump administration is now trying to attract will be exactly such large foreign run and invested assembly plants that do not build up a supplier ecosystem around them.

The final danger from a government policy forcing capital accumulation is that firms with easy access to loans might be incentivized to make unprofitable investment decisions. Especially, managers of corporatized state firms may perceive themselves as facing soft budget constraints and thus focus on goals other than increasing production or loan-payback.[25] This obviously leads to problems in the banking system. Japan, Korea, and China have all been plagued by problems of this sort at various times, although their competition policies have tempered the severity of the problems.

Obviously, there was over-investment in some sectors and some funds went to useless projects. But, that is true of any investment boom. In fact, it is a characteristic of all market-based investment booms.

The fact that South Korea and China built up enough wealth to deal with banking crises rather easily is a good indication that their capital accumulation policies have, on net, been extremely successful. Japan is different because it shifted from a capital accumulation policy to a monetary liquidity driven boom in the mid-1970s, creating a large asset-price bubble which caused the banking crisis.

A market system in which capital owners make the allocative decisions generates too little capital because it ignores positive externalities and it misallocates capital by directing it toward monopolistic returns. The directed capital systems used by the EADM4 can create distortions by providing small returns to savers, by directing investible funds to favored firms, and by not using a price mechanism to sort alternative investments—though these problems are greatly mitigated by competition. There is no a priori reason to believe that the distortions of the EADM system are greater than those of the current American-style capital market system. Comparing

---

[24] Alice H. Amsden, *Asia's Next Giant: South Korea and Late Industrialization*, Oxford University Press, 1992.

[25] See Janos Kornai, Eric Maskin, and Gerard Roland, "Understanding the Soft Budget Constraint," Institute for Advanced Studies, Economics Paper 19. https://www.sss.ias.edu/files/papers/econpaper19.pdf.

the 2010 to 2025 period in the US and China, there is good reason to believe that a low-interest rate regime created by financial repression is less distortive than one created by loose monetary policy.

It is plausible that the government-incentivized capital accumulation system is especially beneficial in the early stages of development. In developing countries, capital shortages are obvious, so government policies that encourage capital accumulation are more clearly needed. Furthermore, capital shortages mean that capital used almost anywhere leads to productivity increases. As the economy develops, it becomes more necessary and more difficult to decide among alternative uses of capital.

Of course, excess capacity has become a problem in many sectors in China, especially those which are suppliers to residential construction, such as steel, concrete, or glass producers. Recently, automobile producers have faced such extreme competition that many are losing money.

Ironically, this type of "involution" is exactly what happens in a competitive market economy. The tendency to create excess capacity and inefficient competitors during a long boom is not in any way peculiar to China. China's car market today looks very much like the US car market in the 1920s, before the General Motors, Ford, and Chrysler consolidated the market by either buying smaller competitors or driving them out of business. The tech investment in China today looks very much like the fiber optic investment boom of the late 1990s. The resulting abundance of cheap factor inputs has been a boon to consumers.

However, now "excess" competition has created large bad debts among companies in these industries.[26] Since local governments are often heavily involved, this process has also created local government bad debt. But the bad debt is not proof that the investment was wasted. First, since investors can't see the future, there is no way to prevent some bad investment under any system so there will always be some mistakes. Second, externalities from the investment, indicated by the resulting high national growth rate, could well justify the investment even though the capital owners are not able to gain sufficient returns. Some payment of the debt by the central government may be necessary, but it will be feasible because the economy has grown so much.

Competition Levels in China

A key thesis of this book is that, during their high-growth rate periods, the Northeast Asian economies enforced competition in many sectors. This competition ensured that much of the return to the rapidly accumulating capital was distributed to the general public through higher wages. This system described above works only if Chinese markets have high levels of competition.

To reiterate a point made in Chap. 2, Chinese internal markets are highly competitive—according to the NBER research from the *Journal of Economic Literature*

[26] See OECD Economic Surveys China, March 2015, Overview, p. 13. http://www.oecd.org/eco/surveys/China-2015-overview.pdf.

cited earlier, most Chinese sectors are roughly twice as competitive as the equivalent US sectors. That important research is worth repeating:

> China has sharply lower concentration ratios, in the order of one-half of the US, for 4 firm ratios. One possible implication is that markets for Chinese manufactured products are considerably more competitive than in the US.[27]

Plus, Chinese domestic markets have steadily become more competitive. Other research, by the OECD, concludes that the number of highly or moderately concentrated sectors declined from nearly 30 percent in the 1990s to only 14 percent in 2007, a much lower level than in the supposedly highly competitive US.[28] Japan had an average three-firm concentration ratio of 44.1 percent in 1962 and Korea's comparable ratio for all industries was 62.9 percent in the 1980s. The Chinese four-firm concentration ratio is only 23 percent.[29]

Economic theory and practice shows that this increased competitiveness, combined with government directed investment, will reduce profits (return to capital owners) and thus will increase wages and/or reduce prices. The decline in concentration in the 2000s, following the Zhu Rongji reforms, confirms that increased competition is a deliberate policy of the Chinese government.

Even in highly-concentrated national industries that are dominated by centrally-owned SOEs, policy has been focused on increasing competition by creating multiple competing SOEs in the same industry.[30] For example, in the telecoms sector, rather heavy-handed intervention was used to minimize any monopoly power of China Mobile and to increase the competitiveness of China Unicom and China Telecom.[31] In some sectors, competition levels are also high because provincial governments support their own "provincial champions" against companies from other provinces.

This high levels of competitiveness in domestic markets are a crucial factor in China's development model. The benevolent cycle would not work without it.

---

[27] Jun Wang, John Whalley, "Are Chinese markets for manufactured products more competitive than in the US. A comparison of China-US industrial concentration ratios," *NBER Working Paper Series*, Working paper 19898, http://www.nber.org/papers/w19898. Also published in *Journal of Economic Literature*, February 2014.

[28] World Bank and the Development Research Center of the State Council, People's Republic of China, *China 2030: Building a Modern, Harmonious, and Creative Society*, 2013, p. 106.

[29] Dylan Sutherland and Lutao Ning, "Exploring and Explaining the Extent of Concentration and Diversification in Chinese Business Groups," Unpublished paper of the Nottingham University School of Contemporary Chinese Studies, 2008. http://www.ceauk.org.uk/2008-conference-papers/Chinese-Business-Group-Sutherland-Ning.doc.

[30] Paul Conway, et al. (2010), "Product Market Regulation and Competition in China, OECD Economics Department Working Papers No. 823, OECD Publishing, p. 10. https://doi.org/10.1787/5km32vmgmfbx-en.

[31] James Huddleston, "The Battle Between China's 3 Telecom Companies and Its Impact on Profits," *Seeking Alpha*, July 23, 2013. http://seekingalpha.com/article/1565812-the-battle-between-chinas-3-telecom-companies-and-its-impact-on-profits.

The Value of Additional Capital

What is the evidence on how the Chinese system has actually done in creating social return to capital? We have argued above that company profits are not a relevant measure since they are largely determined by the degree of monopolistic returns. Rapidly rising wages are a key indicator that the system is generating wealth without causing the problems that could potentially be caused by artificially high savings/investment rates.

The incremental capital output ratio (ICOR) measures the increase in GDP created by an increase in investment. Generally, lower is better. For example, an ICOR = 5 would be an estimate that a 500 billion dollar (or RMB) increase in investment leads to 100 billion dollar annual, permanent increase in GDP. An advantage of this measure is that it might indicate more general societal return to capital, not just returns to capital owners. However, that is true only so far as GDP is a measure of total societal value. In reality, GDP has missed a lot of increases in quality of life.

There is no national or international official agency that publishes an ICOR time series, so it has to be calculated using data on real investment, with a five-year lag, and real GDP growth. John Ross, a senior fellow at Chongyang Institute for Financial Studies of Renmin University in Beijing, has published the most complete available ICOR calculation for China, the US and other countries, derived from World Bank data.[32] His calculations are fully consistent with those for more limited time periods published by the Financial Times[33] and the OECD.[34] Figure 4.1 on p. 79 reproduces his results.

The ICOR data shows that, throughout this history, China's ICOR has been significantly lower than that of the advanced economies or developing countries—implying that China has used its capital more efficiently despite that fact that China has been increasing its capital stock very rapidly. If China had been creating so much capital that it could not be used or had seriously misallocated capital, we would have expected ICOR to rise sharply over the period of very rapid growth in the capital stock. This did not happen.

ICOR in China can be divided into two distinct periods—before and after 2011. Before 2011, ICOR was nearly flat at about 4. It rose to 5 by 2013 and then rose to

---

[32] John Ross, "Why China's socialist economy is more efficient than capitalism," *Monthly Review Online*, June 6, 2023. https://mronline.org/2023/06/06/why-chinas-socialist-economy-is-more-efficient-than-capitalism/. See also his fuller comparison of China's ICOR with those of other countries in the recent book: John Marshall Ross, et al., *Economic Analysis of China in the World: Six International Economists Examine China's Growth and Global Development Initiatives*, LID, 2026.

[33] Andrew Smithers, "Efficiency of capital in developed economies shows long-term decline," *Financial Times,* June 17, 2015. http://blogs.ft.com/andrew-smithers/2015/06/efficiency-of-capital-in-developed-economies-shows-long-term-decline/.

[34] OECD, Perspectives on Economic Development 2014: Boosting Productivity to Meet the Middle Income Challenge. p. 35 and OECD Economic Surveys China, March 2015, Overview p. 16. http://www.oecd.org/eco/surveys/China-2015-overview.pdf.

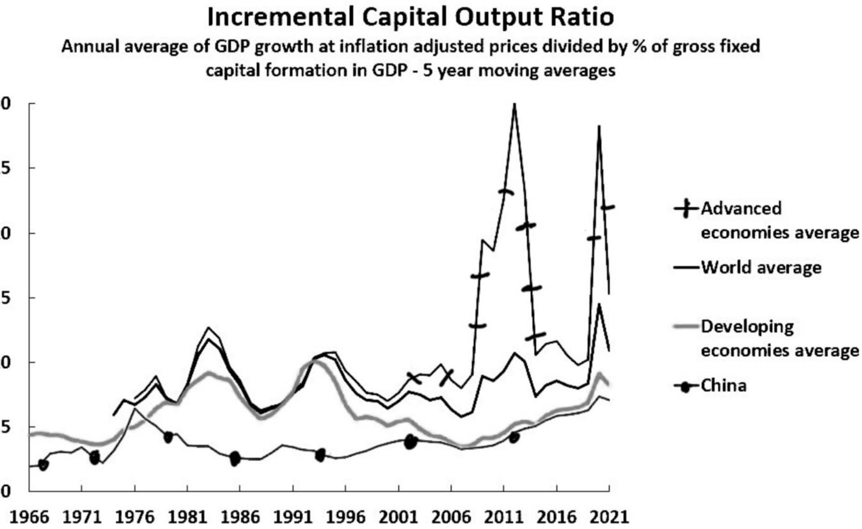

Fig. 4.1 China's ICOR compared to world averages. *Source*: John Ross, "Why China's socialist economy is more efficient than capitalism," *Monthly Review Online*, June 6, 2023. https://mronline.org/2023/06/06/why-chinas-socialist-economy-is-more-efficient-than-capitalism/#. Reproduced with permission of the author

9 by 2017 and has been at 7 to 8 from 2018 to 2025. In the 2000s, much investment went directly into factories or into then-scarce infrastructure. Much investment in that decade went directly into manufacturing and manufacturing related investment which generates output that is easily measured by GDP. China was picking obvious, low-hanging fruit.

After 2011, a large rise in investment took place as China used fiscal and monetary stimulus to deal with the aftermath of the US housing crash and financial crisis, ensuring that China was the only major economy not to enter recession because of that crisis. A lot of the investment went into quality-of-life public investment (parks, sewers, subways, and so forth) or into housing, neither of which generates income streams. These types of investment greatly enhance people's lives over a long period, but many of the benefits are not counted in GDP. Furthermore, it is notoriously hard to measure the marginal productivity of infrastructure investment (railroads, telecoms, roads), especially in the later stages of creating a completed network. Thus, it is surprising that China's ICOR rose only moderately during this period.

At least since the Alwyn Young argument of the early 1990s,[35] East Asian growth has been said to be just a reflection of rapid growth in factor inputs without total factor productivity increases. Based on Young's calculations, Krugman argued that

[35] Alwyn Young, "The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience," National Bureau of Economic Research, Working Paper, No. 4680, March 1994. http://www.nber.org/papers/w4680.

East Asian growth is similar to the high growth rates the Soviet Union achieved in the 1950s and 1960s by forced savings and capital directed into industry.[36] Central to this argument is the view is that these high levels of investment must be undisciplined and wasteful. However, this view is hard to reconcile with the fundamental and unique changes in living standards we have seen in Japan, South Korea and, more recently, China, in the post-WWII era. The whole point of the economic systems of these countries was to accumulate capital rapidly in order to fundamentally transform their output volume and quality and to raise greatly the standards of living of their peoples.

Many countries have failed using this capital accumulation development strategy. But, Alwyn and Krugman misunderstood the difference between the EADM4 and all the others. The EADM4 succeeded because they combined capital accumulation with competition and, consequently, with rising real wages. China, especially, has been able to use internal and external competition to discipline capital owners and to ensure that workers reap substantial rewards from the growth.

[36] Paul Krugman, "The Myth of Asia's Miracle," *Foreign Affairs*, November/December 1994.

Chapter 5
China's Ur-reform: Farming and Village Life

Both scholarly analyses and literary works depict Chinese farmers of the early twentieth century as unhappy, unfriendly, and "selfish." For example, the prominent sociologist Fei Xiaotong, summarizing his studies of rural villages in the 1930s and 1940s, wrote:

> Selfishness is the most serious shortcoming of country people. That is the opinion of intellectuals who advocate rural reconstruction. When we think of selfishness we think of the proverb, "Each person should sweep the snow from his own doorsteps and should not fret about the frost of his neighbor's roof…" (T)he problem of selfishness in China is really more common than the problem of ignorance or illness.[1]

The famous novelist and short story writer Lu Xun, whose work is still widely read in China, and other realist literature of early twentieth century China depicted Chinese peasants as lazy and self-centered, without any concern for their fellow men, except for family and close friends.[2] Chen Duxiu, the first Secretary General of the Communist Party of China, described Chinese peasants as "hypocritical, conservative, passive, constrained, classicist, imitative, ugly, evil, belligerent, disorderly and lazy.[3]" Even now, I've heard people in large cities describe farmers as ignorant, selfish and uncouth.

So it was with some trepidation that I saw a farmer's truck stop near me while I was hiking along a dirt road on Longmashan mountain, near Yuxi city in Yunnan province. To my surprise, the young farmer got out of the truck to give me two of the famous pears grown on Longmashan. Later, I passed by the farmer and his wife

[1] Fei Xiaotong, *From the Soil: The Foundations of Chinese Society.* (*Xiantu Zhongguo*). Translated by Gary G. Hamilton and Wang Zheng. Berkeley: University of California Press, 1992, page 60.

[2] See Lu Xun, *The Real Story of Ah-Q and Other Tales of China, The Complete Fiction of Lu Xun*, translated with and introduction by Julia Lovell, London: Penguin Books, 2009.

[3] Marsten Anderson, *The Limits of Realism*, Berkeley: University of California Press, 1990, p. 27. Cited in Lu Xun, op.cit., p. xix.

D. Blair, *How Nations Succeed*, China and Globalization,
https://doi.org/10.1007/978-981-92-2059-5_5

harvesting pears and their teenage daughter doing her homework in front of a farm building.

I have had lots of opportunities to talk with Chinese farmers in various provinces, both by myself and in groups. Like people everywhere, some are nice, friendly, and seem happy. Others are less so. Mostly, I've been made to feel welcome. I don't recognize the selfish, bitter and unhappy farmers depicted by Fei Xiaotong and Lu Xun.

My impression is that most Chinese farmers now lead a pretty good life. In many ways, the lives of Chinese farmers and people living in smaller cities is now better than the lifestyles of average people in the largest cities. Often, I, a middle-class American, am envious of farmers' houses and their overall lifestyle.

How was this huge change in rural lifestyle quality accomplished? My basic thesis is that the biggest improvements were achieved in two stages: (1) the de-collectivization and small-scale rural industrialization of the 1980s and (2) the rural development and investment programs, including widespread infrastructure projects, which started in the early-2000s, ramped up in the 2010s, and were reinforced with the formal Rural Revitalization strategy adopted by the 19th National Congress of the CPC in 2017—which continues until today (2025).

First, the initial de-collectivization reforms of the 1980s restored the personal incentives needed to motivate hard work and, thus, solved the problem of hunger in rural China by increasing productivity per hectare. Crucially, government policies toward private and collective business began to loosen up, allowing farmers in this period to start small businesses, often light industry, to supplement their agricultural incomes.

China in the 1980s established a *de facto* system of labor-intensive, family-based small holdings similar to other densely populated and successful Asian rural economies. In Japan, South Korea, and Taiwan province land reforms establishing small farms were essential first steps on the road to industrialization using the East Asian Development Model.

In his book *How Asia Works*, journalist Joe Studwell explains why this kind of labor-intensive small holding agriculture, which he describes as "gardening," is a crucial step in the EADM process. He writes:

> Big capitalist farms may produce the highest return on cash invested. But that is not the agricultural 'efficiency' that is appropriate to a developing state. At an early stage, a poor country with a surfeit of labor is better served by maximizing its crop production until the return on any more labor falls to zero….You might as well use the labor you have—even if the return per man hour looks terribly low on paper—because that is the only use you have for your workers.[4]

Milton Friedman's famous quip—"Why don't they use spoons?"—cited in Chap. 1, revealed an ignorance of the underlying shortage of foreign currency, capital and domestic heavy equipment manufacturing capacity in an early-stage developing

[4] Joe Studwell, *How Asia Works: Success and Failure in the World's Most Dynamic Region*, New York: Grove Press, 2013, p. 4.

economy. (Now, 2025, Chinese companies build some of the best and most cost-effective heavy construction equipment in the world.). More importantly, as we have seen, it also shows a misunderstanding of the importance of jobs for the psychological health and future prospects of workers. As we saw in Chap. 1, the Chinese government has, for these reasons, a policy of emphasizing ways of giving people jobs, even low productivity jobs, instead of building up a multi-generational dependence on soul-depleting monetary transfers.

The East Asian kind of small-holder agriculture can solve the problem of hunger and it utilizes the work force when there are no other opportunities. But the produce of these small, labor intensive farms provide low incomes. So, naturally, most people want to move to other opportunities if possible.

By the 2010s, Chinese agriculture faced a very different problem than it faced in 1978. Many younger farmers have moved to higher paying jobs in factories or cities, so much of the remaining farm population is elderly. So, China has faced a dual challenge—increasing farmer living standards while sharply increasing the productivity of agriculture *per worker* to deal with the fact that most young people from agricultural areas now have better options than working as near-subsistence farmers. So rural living standards have to rise both to improve the lives of elderly farmers and to encourage enough young people to stay.

The Rural Revitalization program consists of two related approaches:

The government has built very good infrastructure—roads, railroads, and high-speed internet capability—even to very remote regions, implementing the slogan "To become rich, first build roads" that has been frequently heard in reform China since the 1980s. This has created opportunities for people in these regions and allowed young people to remain in or return to their home regions, either their original village or a nearby small town or city. It has also raised the farming population, much of which is now elderly, out of poverty. Also improving the position of farmers, the Tenth National People's Congress voted to remove the agricultural tax in 2006, which had burdened Chinese farmers for millennia.[5]

At the same time, there have been a series of reforms of land tenure laws that have allowed farmers to sign long-term leases with companies who can consolidate the small plots and use technology—drones or other means of delivering precision agriculture. This is preparation for the time when the current farmers can no longer work (a time that has basically already arrived) and most of their children have chosen not to replace them as farmers. So, China has to move to more large scale, technological farming.

Note that the policy will have to vary to fit local conditions. Much of the terrain in Southern China is mountainous, with farms nestled in small valleys. Often these farms are not suitable for mechanization and may prove to be not viable in the future—though these small farms might continue to supply fruits and vegetables to nearby cities. On the other hand, much of the land is Northern China is flat and is very suitable for mechanized agricultural techniques, which are already widely

[5] Xinhua News Agency, October 15, 2023.

deployed. In wheat-producing north-central Anhui province, agricultural policy as early as the late 1980s focused on merging the previously scattered fields of a particular farmer in order to prepare for high-tech agriculture.

In many ways, China's rural areas are restoring the vibrant small business and farm economy that existed before the Century of Humiliation began in the 1840s, but with the added advantage that new infrastructure and new technologies reduce the traditional isolation and limited opportunities of rural life.

Communities and Social Capital

I believe that the unhappy, unfriendly, and selfish attitudes of villagers seen in the early twentieth century were substantially caused by the economic stress of the long Chinese great depression that accompanied the Century of Humiliation. The famous Chinese sociologist Fei Xiaotong says that the farmers in the late nineteenth and early twentieth centuries faced constant danger of poverty and hunger and even were driven to commit infanticide against their own children. People forced to such measures against their own family are unlikely to appear welcoming to strangers.

In a very similar way to what was seen in China during the century of humiliation, economic troubles in the American Midwest since about 1970 have led to "selfishness," including crime, drug and alcohol abuse, inequality, psychological depression and a general falling apart of society.

Robert Putnam, a political science professor at Harvard, and other prominent social thinkers such as James Coleman and Jane Jacobs have stressed the importance of "social capital," which means the in-depth associations that tie people to their neighbors and other people in their vicinity (no connection to the Chinese statistical term Total Social Capital). Putnam shows convincingly that regions of the US with high social capital have many fewer social pathologies. For example, children do much better in school. But he also shows that social capital has fallen sharply everywhere in the US.

Chinese social capital, especially in rural areas, was extremely restricted during the Century of Humiliation and continued to be very low during the strife of the great leap forward and the cultural revolution. In periods of extreme hardship, each person became concerned only with close family and a few friends—probably not including close neighbors. The rising prosperity and opportunities since 1978 combined with the government's emphasis on social harmony has led to steadily rising and more inclusive social capital. In many ways, the current government's emphasis on "common prosperity" is a way of building social capital while reducing the divisive effects of inequality, unfairness, or corruption.

The English term "civilized," which is similar in many other European languages, implies that culture comes from cities. But, the Chinese equivalent "Wenhua" has no such implications. Reportedly, the modern Chinese use of wenhua is derived indirectly through Japanese from the German word "kultur," which has implications of being concerned with traditional rural and small city culture. Wenhua also seems to have been derived from older words meaning civil (as opposed to military) administration through education,[6] which has been a persistent part of Chinese governance for millennia.

China's recent investments in providing infrastructure and education throughout the country are reducing the advantages to living in a city. They sharply reduce the historic rural isolation. We are now seeing a partial redirection of Chinese culture and population toward rural areas and smaller cities away from extreme urbanization into very large cities. The rise of rural e-commerce, geographically diversified industry, and good opportunities away from the largest cities is beneficial for an economy as a whole because it is a redirection of resources toward the real, productive economy.

The move away from large cities is also beneficial culturally and psychologically. In many large Chinese cities, just as in large Western cities, huge numbers of young people are suffering from depression and other psycho-social illnesses. In the words of the prominent early twentieth century British philosopher Bertrand Russell, "Industrial culture has great defects which are not likely to be remedied except by contact with non-industrial communities or ideals."[7]

China does have social problems. The current difficult economic transition has created high levels of unemployment and thus psychological issues, especially among young people. I believe that the current economic, social, and psychological crisis both in the West and in China has substantially arisen because young people have been separated from traditional rural structures of social and family support. We can hope that the movement away from large cities can be beneficial to culture and psychological strength, as much as to economic growth and resilience.

My family history provides some context for the change in community that has taken place in the US and China. My parents, born in 1935 and 1936, grew up in the very small and then isolated town of Marianna, in north Florida. Both their families were materially poor by today's standards, though not necessarily by the standards of that time and place. They described the Marianna of that time as having strong community bonds—excellent schools that taught in-depth history, strong extended families, very active music and literature clubs, little crime. (Shamefully, black citizens were, to put it mildly, excluded from the benefits of the society.). At young ages, both my parents were allowed to wander around on their own. In contrast, I (born in 1956) grew up in a fairly standard suburb in Clarksville, Tennessee. Material goods were abundant, but I don't remember many clubs or other social organizations. Church organizations were still fairly strong, though much weaker than in the 1940s and 1950s. In my annual visits to Clarksville now, it certainly seems to be a more run down and rougher place, like much of the US.

My wife (born 1971) grew up in a small town in Yunnan province, which is generally viewed as one of the poorest parts of China. Her father was a chemical engineer and quite entrepreneurial, so her family was not among the poorest, but she still tells stories about her mother crying at night because the family did not have enough

[6] https://troubadourworks.com/tiandi/meotw/2021/01/11/wenhua/.

[7] Quoted in William Nathanson, "Culture versus Civilization: Oswald Spengler's and Bertrand Russel's Social Prognosis," https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?article=3702&context=ocj.

food. However, the social capital of her environment was very high. At a young age, she was allowed to roam free and get to know the area. Her schooling appears to have been excellent. She was surrounded by extended family and friends. This contrasts sharply with many children now in the big cities of China, where many have abundant material goods but little sense of community (just like in US cities now).

My observation is that much of the old community and social capital still exists in China's small towns and rural areas. In many cases, these remote connections continue into the cities as people maintain links to their hometowns. Combined with rising incomes, growing social relationships have led to general happiness and satisfaction in villages and towns I have visited. This would not have been possible without rising incomes and the new opportunities created by rural revitalization investments.

A Short History of Chinese Agriculture

Economic Depression During the Century of Humiliation

Chinese farmers have not always been as poor as those depicted by Fei Xiaotong, Lu Xun, Chen Duxiu, or in the moving Nobel-prize winning novels of Pearl Buck.[8]

Obviously, Chinese farmers have for at least a millennium faced the problem of small agricultural plots and the resulting low agricultural incomes because China feeds 22 percent of the world's population on only 7 percent of its arable land.[9] This currently amounts to only about 0.08 hectares (0.2 acres) of arable land per capita.[10] However, during many times in Chinese history, farmers have been able to supplement their incomes from farming with incomes from small industries, the predecessors of the Traditional Village Enterprises of the 1980s and 1990s.

University of Chicago historian Kenneth Pomeranz famously argued that the average people, mostly farmers, of at least the Yangtze river valley were more prosperous than average people in Western Europe, even England, from the 1400s through the early 1800s, during the Ming and Qing dynasties.[11] This was made possible by a combining small farms with small village industries, often cloth-making. And, along the Yangtze river and the Grand Canal, agriculture and industry was facilitated by what was then arguably the best transportation system in the world.

In *The Communist Manifesto*, Marx and Engels wrote:

> The cheap prices of commodities are the heavy artillery with which it (international capital) batters down all Chinese walls, with which it forces the barbarians' intensely obstinate

[8] See Pearl S. Buck, *The Good Earth Trilogy*, New York: Open Road Integrated Media, 1959.

[9] CGTN, *China's Mega Projects: Food*, TV show available on Youtube. https://youtu.be/AmVNwilQJvc?si=WBsQPt3bcOACXYaz.

[10] World Bank data. https://data.worldbank.org/indicator/AG.LND.ARBL.HA.PC?locations=CN.

[11] Kenneth Pomeranz, *The Great Divergence: China, Europe and the Making of the Modern World Economy*, Princeton: Princeton University Press, 2000.

> hatred of foreigners to capitulate. It compels all nations, on pain of extinction, to adopt the bourgeois mode of production; it compels them to introduce what it calls civilization into their midst, i.e., to become bourgeois themselves. In one word, it creates a world after its own image. The bourgeoisie has subjected the country to the rule of the towns. It has created enormous cities, has greatly increased the urban population as compared with the rural, and has thus rescued a considerable part of the population from the idiocy of rural life.

Marx and Engels also stressed the impact of "uninterrupted disturbance of all social conditions," concluding that; "All that is solid melts into air, all that is holy is profaned, and man is at last compelled to face with sober senses his real conditions of life, and his relations with his kind."[12]

Although the *Communist Manifesto* was written in 1848, too soon after the first Opium War for the writers to have observed the impact of the premature flow of English manufactures against Chinese rural businesses, this paragraph is a good description of the impact of cheap commodities on rural China. In the nineteenth century, the Qing dynasty was so weak that it could neither isolate and protect the old economic system nor move to a new industrial system. Along with the deleterious effects of forced opium flows on society, dumped British products led directly to the impoverishment of Chinese farmers and small businessmen. Thus impoverished, Chinese small towns and farmers became much more isolated than they were previously.

According to Graham Joncas, a Toronto-based linguist and venture capitalist, there is some question about the translation of Marx's German word "idiotismus" into "idiocy" in English. Some scholars argue that it derives from the Greek word "idiotes," which means "a private person, withdrawn from public (communal) concerns, apolitical in the original sense of isolation from the larger community."[13] We will see below that the current Chinese rural revitalization program which emphasizes spreading transportation and communications infrastructure along with education and healthcare around the country has sharply reduced the "idiotismus" of rural China, however that word is defined.

According to Pomeranz, the small holdings were held as fee simple property, meaning that the small farmers could freely trade their property and that "eighteenth century China (and perhaps Japan as well) actually came closer to resembling the neoclassical ideal of a market economy than did western Europe.".[14] However, Fei Xiaotong argues that familial and lineage attachment to land made Chinese farmers extremely reluctant to treat farmland as simple tradable property.

The Chinese government also was aware of the dangers of allowing monopolists to seize the value of small holders' production. Pomeranz noted that "…the Qing state was very concerned to make sure that local marketplaces had multiple

[12] Karl Marx and Frederick Engels, *Manifesto of the Communist Party*, Chapter 1, https://www.marxists.org/archive/marx/works/1848/communist-manifesto/ch01.htm.

[13] Graham Joncas, 'Mistranslating Marx? The "idiocy of rural life,"' Linguistic Capital, September 27, 2011. http://linguisticcapital.wordpress.com/2011/09/27/mistranslating-marx-the-idiocy-of-rural-life/.

[14] Pomeranz, op.cit., p. 70.

competing buyers and sellers for basic items—until the 1850s, this was in fact the main goal of their system of licensing merchants and brokers."[15]

In his 1930s intensive analysis of a village on the south shore of Lake Tai, which is in the heart of the Yangtze delta, Fei Xiaotong emphasizes that the farmers of the early to mid-twentieth century were much poorer than their ancestors had been a century before. Imported European products wiped out the centuries-old silk industry which had supplemented their income from growing rice. He argues that the "Century of Humiliation" that began with the Opium Wars of the 1840s was felt by Chinese villagers as the destruction of their industrial incomes.[16] In a sense, the Century of Humiliation began because China was forced into economic globalization before it was prepared.

However, Pomeranz does argue that the decline in Yangtze delta farmers' incomes may have begun as early as the 1750s due to competition from other areas of China.[17]

The decline of village industry was prevalent throughout China, not just limited to the Yangtze delta. Describing her visit to Chiqiao town in rural Shanxi, a coal producing province in northwest China, Henrietta Harrison writes:

> …it was immediately obvious that these villages had once been wealthy. The main street in Chiqiao is lined with buildings that were once shops but have long been bricked up for use as housing. Off the street, the narrow lanes run into large yards with dilapidated chimneys and collapsing sheds that once housed the village's paper-making industry….the villages of central Shanxi were transformed from prosperous centers of commerce and industry into impoverished and largely agricultural communities.[18]

The worldwide depression of the 1930s and the Japanese invasion further impoverished Chinese farmers. So, by the time of the 1949 revolution, Chinese farmers were in a worse position than they had suffered for centuries.

Comparison with the Golden Age of the American Midwest

In a strange parallel to the economic and social collapse seen in China from the 1840s to 1940s, the American Midwest has gone from being a beautiful economy and society to being deeply troubled. The large and small industries that had previously led to rising wages and good jobs were destroyed after the US government abandoned the New Deal economic policies which had created prosperity from the 1930s to about 1970. Many US politicians will try to shift the blame for this to

---

[15] Pomeranz, op.cit., p. 86.

[16] Fei Xiaotong (Hsiao Tung Fei), *Peasant Life in China: A Field Study of Country Life in the Yangtze Valley,* London: International library of sociology and social reconstruction, 1946, first published 1939.

[17] Pomeranz, op.cit., p. 22.

[18] Henrietta Harrison, *The Man Awakened from Dreams: One Man's Life in a North China Village, 1857–1942*. Stanford: Stanford University Press, 2005.

Chinese competition, but the timeline does not fit. The Midwest decline became substantial in the 1970s, long before there was any Chinese competition.

In many ways, the Chinese village economy before the 1800s reminds me of the economy of the US Midwest in its prosperous and dynamic century, roughly from the end of the US Civil War in 1865 to the 1970s. Because of the Northwest Ordinance of 1787, the land West of the Appalachians and North of the Ohio river was divided into small family farms and slavery was forbidden. In its glorious years, the Midwest might have had the best economy and society in the history of the world. Real wages for average people were rising during this time. There was social stability, minimal societal pathologies and low levels of lifestyle inequality. Both industrial and agricultural jobs gave most people good opportunities to provide for their families.[19]

What actually happened to destroy this beautiful economy was that the US government took a number of steps that concentrated economic power in a small elite, largely based in Washington, Manhattan, and, later, Silicon Valley. These policies included failing to enforce anti-trust law, creating a low-interest rate monetary regime, and destroying the competitive and real-economy-oriented New Deal financial system that had previously supported industry. The result has been stagnant or declining average wages and a transfer of roughly 6 percent of GDP from workers to capital owners and rentiers. It is no accident that six of the ten wealthiest counties in the US are now suburbs of Washington, DC. In 1980, incomes were higher in Cleveland, Ohio than in New York City, which is almost unimaginable today.

1950–1953: Land-to-the-Tiller Policy

In 1983, I worked briefly on the Reagan Administration-supported land reform program in El Salvador. The small Central American country which had long had a reputation for violence was in the midst of a civil war between a small oligarchic elite and a Soviet-supported guerilla group. In the middle was the Christian Democrat President Napoleon Duarte, who was trying to bring peace by implementing a land reform program that would take land from large landlords and distribute it to small farmers in what was called the "land to the tiller" program.

The theory was that much of the violence arose from farmer anger about a land seizure that took place in the 1860s. Traditional Salvadoran agriculture was based on an "eijido" system, a kind of village collective similar to that found in pre-Columbian Mexico. In the 1860s, an oligarchic government took over and gave the land to a very small elite, the famous seven families.

Many other countries have had similar conflicts between a small land-owning elite and a mass of small farmers. In the English enclosures of the 1500s and early

[19] For a good depiction of the American Midwest, see Jon K. Lauck, *The Good Country: A History of the American Midwest, 1800–1900*, Norman: University of Oklahoma Press, 2022.

1600s, the nobility seized control of land traditionally farmed by peasants. Similarly, the Russian nobility controlled the land farmed by serfs.

In the southern United States (in contrast to the Midwest), large landowners controlled large plantations worked by slaves until President Lincoln freed the slaves in 1863. During the Civil War, General William T. Sherman promised that each family of freed slaves would receive 40 acres and a mule and after the war the Republican government attempted to implement this land reform. But large landlords and paramilitary groups such as the Ku Klux Klan were able to thwart redistribution and set up a sharecropper system not too different from slavery. It is interesting to think how much better American history would have been if the freed slaves had been allowed to become a small farmer/entrepreneur class.

After World War II, the US forced land redistribution to break up the large estates in formerly Japanese controlled areas—Japan, Korea, and Taiwan. Many analysts believe this land reform was necessary before the East Asian Development Model industrialization could start. Compare the history of these economies with that of the Philippines—which was by far the richest country in East Asia in the late 1940s but fell far behind because its economy is controlled by a land-owning elite persisting from Spanish colonial times.

Maybe surprisingly to most Westerners, Chinese agricultural history is very different. There is no history of a super-rich landowning aristocracy and few examples of elite land seizures. Fei Xiaotong found remarkably equal societies in the villages he studied in the 1930s and 1940s. The long agricultural depression during the Century of Humiliation did lead lots of small farmers into debt, bankruptcy and land loss, but there is little history of the kind of systematic land theft and appropriation that we see in many countries. Instead, China in 1949 consisted of hundreds of millions of small farmers who were increasingly impoverished because of the general destruction of village enterprises.

In his seminal book on China's economic development, *Ten Crises: The Political Economy of China's Development (1949–2020)*, Professor Wen Tiejun of Renmin University wrote,

> The basic policies (immediately after the 1949 revolution) were to advance gradual industrialization under national capitalism. The idea was to promote private industry and commerce in cities, develop middle-class peasants and preserve the well-to-do households in rural areas, so as to form a commodity circulation between light textile industry in cities and the rural sector.[20]

Wen describes "the land to the tiller" agrarian reforms of the early 1950s as restoring the traditional peasant economy and creating a "land reform dividend."

> the overall land reform allowed peasants (88% of the population) to delink themselves from the urban crisis of modernization and return to the traditional peasant economy. An extensive and vastly diversified physical economy took shape in rural regions.[21]

---

[20] Wen Tiejun, *Ten Crises: The Political Economy of China's Development (1949–2020),* Palgrave Macmillan, 2021, p. 8.

[21] Ibid., p. 21.

In this economic respect, land reform in China was quite similar to those implemented at about the same time in other East Asian Development Model economies—Japan, South Korea, and Taiwan province. They are also similar to Lenin's "New Economic Policy" which led to growing prosperity in the new Soviet Union of the 1920s before Stalin decided to implement a rapid industrialization program based on expropriating resources from farmers.

Also like many other land reforms, the early 1950s in China were violent, with lots of killings. Plus, there was substantial argument among the leadership about the reform approach. There were strong arguments about whether better-off farmers achieved their position by exploitation or by smarts and hard work. This debate continued until the 1980s; an elderly man in Yunnan told me that Deng Xiaoping's reforms corrected the imbalance by rewarding smart people.

It is interesting to speculate about China's economic progress if the "land to the tiller" model that emphasized rural prosperity had continued. The only other economy I can think of that became developed through a similar process is the American Midwest, and, even there, substantial British capital in the late nineteenth century funded many infrastructure projects. It is possible that China in the 1950s could have started to achieve the diversified integrated rural-urban economy to which it seems to be headed now. On the other hand, this system might not have allowed the needed primitive capital accumulation. In any case, by the mid-1950s, Mao decided to follow the Stalinist development model of using the surplus from collective farms to create heavy industry.

1956–1980: Collective Agriculture

In many ways, the collectivization of agriculture during the late 1950s, continuing until the late 1970s, was inconsistent with Chinese history. Instead, it was very similar to the collectivization and industrialization strategy used by the Soviet Union in the 1930s, even though Chinese agricultural history is very different from the history of large farms and serfdom in Russia.

Wen Tiejun's key analytical innovation is simply to ask who gains from each reform. He says that the purpose of collectivization of agriculture was to seize the agricultural surplus to pay for Soviet investment and argues that, "China's industrialization involved internally extracting surplus from the agriculture sector to support industrial accumulation,"[22] and that "before the Reform, most of the crises in urban China were resolved by transferring the cost to the collectivized rural communities." Even the policy of sending urban youth to the countryside was a way of forcing the rural people to provide support for unemployed urban youth, according to Wen.

[22] Ibid., p. 11.

The main purpose of the collectivization of agriculture from 1956 to 1980 was to extract the "primitive capital accumulation," in Marx's words, needed for rapid industrialization. In particular, these resources were needed to pay for the factories and expert advice purchased from the Soviet Union in the late 1950s.

In what was essentially a closed system, where Western investment was unavailable and Soviet resources were far from free, the only source from which to get immediate capital was the farmers. This was a direct repudiation of the strategy of gradual build-up of national capital through farming and rural industrial that was implied by the land-to-the-tiller policies of the early 1950s. Since their purpose was the extraction of resources from the farmers, the collectivization policies led directly to the impoverishment of rural areas.

Throughout the collectivization period, planners believed that a series of policies would increase agricultural productivity. First, they argued that simple economies of scale would enable higher yields than from small plots. In the 1960s, fertilizer use and new plant varieties were encouraged. Later, mechanization was emphasized. Some of these policies, especially high-yield varieties of rice, have had long-term benefits. But the incentive structure within collective farms was so bad that none of these policies led to productive farms.[23]

The most severe time of food deprivation was in the late 1950s and early 1960s. An elderly farmer's wife told me that she went years without eating even a single egg during this time. Farm life was so tightly controlled farmers were not allowed to raise their own chickens or pigs. Even if they happened to find something to eat, they had to turn it in to the village. Neighbors were encouraged to report any violations. Extreme hunger was mostly eliminated by the mid-1960s, but my wife, who was born in rural Yunnan in 1971, remembers her mother crying at night because the family did not have enough to eat.

Peking University economist Justin Yifu Lin reported that over the entire 26-year period from 1952 to 1978 food production grew at 2.4 percent per year, only slightly faster rate than the total population, so per capita food production grew only 10 percent total during the period. This included a sharp drop in production from the start of collectivization in 1953 to the end of the great leap forward in 1962.[24] In sharp contrast, agricultural production grew at 7 percent per year during the first decade after the agricultural reform started in 1980.

A now-elderly Yunnan farmer told me how bad the lives of farmers were in the late 1950s and early 1960s. He recalled seeing an old man sit down one day and just die of hunger. The farmer said that the worst years were the time of the "big kitchen," officially called the "People's Commune's Great Canteens," when families were not even allowed to have private meals together. Neighbors were required to snitch on each other in order to enforce these policies. It is hard to imagine a policy less conducive to social trust and thus to the buildup of social capital. Attempting to extract enough surplus from farmers required a lot of force.

---

[23] Justin Yifu Lin, *Demystifying the Chinese Economy*, Cambridge University Press, 2012, p. 153.

[24] Ibid., p. 153.

At this time, farmers were tightly tied to their home commune because, in addition to money, they needed tickets provided by the local government to buy anything at all. Thus, emigration to nearby cities, much less Beijing or Shanghai, was made legally impossible.

1980-Approximately 1992: De-Collectivization and the Growth of Rural Industry

The decision to de-collectivize agriculture was made easier by the fact that the productivity of the collective farms was so low that there was not much surplus to extract and send to the city. The collectivized agriculture path to primitive capital accumulation was simply unworkable.

So, China began to follow two distinct paths. First, reforming agriculture raised food production sharply (solving the hunger problem) and rural people began developing small scale local industry and other small businesses, usually under the umbrella of traditional village enterprises. The 1980s were a return toward China's pre-1840 system of integrated small farming and rural industry. It is also similar to the economy of the American Midwest during its glorious century (1865–1970).

From 1978 to 1986, agricultural production grew at 7 percent per year and the portion of the population suffering extreme poverty was reduced by 50 percent, according to Li Xiaoyun of China Agricultural University. Since 90 percent of China's population then worked in agriculture, this was transformative for the entire nation.[25]

Li argues that a crucial factor was that rural people took the money they earned from agriculture and organized themselves to create small and medium-sized industry. During this period, before private businesses were made legal in China, many villages set up small companies, called Traditional Village Enterprises, to supplement the village income.

For example, a village in Yunnan set up a construction company that created jobs for villagers, giving them incomes and opportunities to develop business management and construction skills. This type of business was very common in the 1980s, yielding rising rural incomes even after the one-time shock increase in agricultural incomes enabled by the move to the household responsibility system peaked in the mid-1980s.

Many of these TVEs were sold to private investors after private companies were legalized in 1992. For example, the TVE construction company in the Yunnan village was sold to a small team of 6 investors that year. Subsequently, the new private manager became the second richest man in the region. It is likely that some TVE's were sold at below market value because regulations specified that TVE profits

[25] See Li Xiaoyun, "Major drivers of poverty reduction in China," lecture as part of the "In Pursuit of Development" website, 2000. https://www.youtube.com/watch?v=Uyzt2teH9C8.

could be used only for village infrastructure investment or social policies, not for direct income for villagers, so it is likely that the villagers did not see the full market value of the company.

During most of the 1980s, villagers still needed both money and a permission ticket from the local government to buy products. They were also paid wages by the local government according to a score assigned to each worker. So, villagers were not able to move from their home area since both their incomes and their consumption opportunities were controlled by the village. Despite these restrictions, the 1980s were good years for most farmers.

1992–2010: Adapting "global best practices" and Urbanization

The reforms that allowed Chinese rural citizens to return to the traditional (pre-1840s) system of small farms and small industries sharply improved the living standards of most rural Chinese. But it is hard to see how this system would have been able to accumulate the capital needed to create the infrastructure or investment needed to build an industrial economy. Furthermore, this system would not have allowed Chinese entrepreneurs to develop either the expertise or the capital needed to compete in the world economy. So, moving to the traditional village economy was very beneficial, but its indefinite continuation probably would not have permitted the transformative changes we have actually seen in China.

Chinese policymakers were shocked and warned by the economic collapse of debtor nations (South Korea, Thailand, Indonesia, Russia, etc.) during the Asian financial crisis of 1997–1998, so they resolved not to follow the path of debt-based capital accumulation.[26] Instead, they insisted on foreign direct investment into factories, which became the initial seeds for Chinese entrepreneurs to develop industrial clusters in many sectors throughout Southeast China.

The Chinese government began directing resources to Western China and rural areas as early as the Asian Financial Crisis and began investing several trillion renminbi after adopting the "Go West" policy in 2001 and the "Building a New Socialist Countryside" strategy in 2005.[27] These policies were designed to spread prosperity from the early-mover southeastern provinces. But, the income gap between the big Eastern cities and rural and Western China continued to increase during the 2000–2010 decade.

This infrastructure investment, combined with other elements of President Xi's signature "rural revitalization" strategy began to pay off. In the years, 2016–2019, GDP growth rates in formerly impoverished Southwest China grew faster than in any other region of China. Some Western cities, especially Chengdu, Chongqing,

---

[26] Thanks to Wen Tiejun for making this point during a conversation in April 2024.

[27] Wen Tiejun, *Ten Crises*, op.cit., p. 5.

and Xi'an became technological and industrial centers and boasted some of the best life quality in all of China.[28]

In every country with a substantial rural population, there will always be a conflict between the desires of a city-based elite and a large rural population. For example, politics in the US from the end of the Civil War in 1865 to around the start of World War I was dominated by conflict between farmers and a largely New York City-based banking and industrial elite. William Jennings Bryan, nominated three times as the Democratic Party candidate for President, famously said the American farmer would not be sacrificed on a cross of gold (meaning New York City-based banks.)

A common Western statement is that one reason Chinese reform succeeded is that it was "reform without losers.[29]" But, for farmers, this was not what happened. China's period of low-wage industrialization (roughly 1995 to 2010) was hard on China's rural and areas. Kerry Brown, an Oxford University expert on Chinese history, writes that the countryside "was still a place most young wanted to get away from, where healthcare and public goods were poorly developed, and where there were huge inequalities in terms of gender balance and wealth levels."

Maybe more importantly, he cites Chinese research that said that "local officials were regarded as the enemy, meeting out extortion, violence, and summary justice on local people."[30] One key complaint of local people was that their land was expropriated with little compensation by local officials. A crucial part of President Xi's rural revitalization policies has been to bring the rule of law and good government to the countryside, along with the more material investments in infrastructure, education, and healthcare.

Social Problems of the Great Migration

Professor Li Xiaoyun of China Agricultural University argued that China began a new era in about 1995 as foreign direct investment created an initial group of factories in Eastern China, which motivated a mass migration away from villages to city-based industry.[31] The wages in these factories were low, but many young rural

---

[28] Jones, Lang, Lasalle, '"Go West" and China's Inland Gateway Cities,' June 26, 2020. https://www.joneslanglasalle.com.cn/en/trends-and-insights/research/go-west-and-china-inland-gateway-cities.

[29] The term "reform without losers" is derived from Qian Yingyi, *How Reform Worked in China: The Transition from Plan to Market*, MIT press, 2017, and Qian's earlier work. Qian is careful to point out the tradeoffs between different groups in society in addition to his core argument that productive slack permitted widespread growth. But some popularizers of this phrase have been less careful.

[30] Kerry Brown, China's Dream: The Culture of Chinese Communism and the Secret Sources of Its Power, p. 119.

[31] Li Xiaoyun, "Major drivers in poverty reduction in China," op.cit.

people saw them as better than the subsistence, small-plot farming that, for many, was their best option in rural areas.

In most countries, periods of low-wage industrialization are also periods of movement from rural areas to cities. China had a "great migration" in the same way that the US saw a great migration (substantially but not exclusively of African Americans) from the then agricultural South to Northern industrial cities in the 1920s. (The US migration is brilliantly portrayed in the sixty-painting series by Jacob Lawrence called "The Great Migration," now held by the Museum of Modern Art in New York and the Phillips Collection in Washington.)

Some of these young people found ways to thrive in the cities. But, for many others life was very hard. They faced social isolation and psychological angst and longed for their families back home. The rural revitalization programs, which became prominent after about 2010, were aimed partly to improve economic opportunities and living conditions to people who might want to return to their families at home.[32]

Such stories during the early stages of industrialization are not unusual. The much publicized youth problems called "lying flat" or "let it rot" are worldwide, certainly not unique to Chinese big cities. Much American country music is about factory workers in Northern cities longing for their hometowns. See the iconic song from 1962, "I want to go home," written by Danny Dill and Mel Tillis. It begins with the line "Home folks think I'm big in Detroit city," and ends with the refrain, "Lord, I just want to go home." On the other hand, another famous song from the 1920s, following the return of American soldiers from World War I includes the refrain, "How're you gonna keep 'em down on the farm once they've seen Paris?"

Similarly, Stephanie Bond's six volume series, *Factory Girl*, details the trials of a young girl growing up in a small town in Tennessee who moved to a factory in Michigan.[33] See also Patricia *Tsurumi's Factory Girls: Women in the Thread Mills of Meiji Japan,*[34] which depicts early Japanese industrialization in the late nineteenth century. Barbara Greenwood's similarly named *Factory Girl*[35] shows the hardships of early Ontario industrialization. And, there are many other such stories.

It is not all hardship. In Ethiopia, I was able to talk with workers in Chinese-owned garment and shoe factories, who were usually very happy to get a job in the factory. Tellingly, most of them were from the Addis Ababa area and were able to go home to their families every night.

In 2018, I had the opportunity to talk with women working in a garment factory in prosperous Zhejiang province, in eastern China near Shanghai. They earned

---

[32] See, for example, the moving stories told in Leslie. T. Chang, *Factory Girls: Voices from the Heart of Modern China*, Random House, Reprint edition, August 4, 2009.

[33] Stephanie Bond, *Factory Girl*, ran as a series on her website stephaniebond.com. Parts 1–6, 2019, available on Kindle.

[34] Patricia Tsurumi, *Factory Girls: Women in the Thread Mills of Meiji Japan*, Princeton University Press, 1992.

[35] Barbara Greenwood, *Factory Girl*, Kids Can Press, 2007.

about 5000 RMB (roughly $750 US dollars) per month, which is enough to live a pretty decent life in much of rural and smalltown China, especially if the family owns a plot of land and a house. The women were somewhat satisfied with the pay and the work, but they strongly missed their parents and children who remained at home in southern Guangxi province. Clearly, "hukou" policies that prevent these women and other migrant workers from obtaining normal public services, including education for their children, in Zhejiang have made their lives harder.

2010-Present: Rural Revitalization and the Transition to Larger, Higher Tech Farming

The accumulated physical capital, skills, and business capabilities China built up during the 1995–2010 period meant that wealth was available to improve rural areas. This vast project includes continuing to build new infrastructure, aiding local people to develop the expertise to build local businesses able to compete nationwide, improving local governance, improving education and health care. At the same time, the Chinese government needed to ensure that the infrastructure, skills, and legal institutions were available that would allow the development of much less labor intensive, higher tech and higher productivity agriculture. Simultaneously achieving these diverse goals has been a key project of the central government since 2013. According to the State Council, the Chinese Government invested 6.35 trillion RMB (about 914 billion US dollars) in Western regions, mostly in infrastructure and energy.[36]

One big advantage of the rural revitalization policies is that they are allowing young people to return to their home areas, either their home village or a nearby city, often to start small businesses. Many Chinese young people no longer feel the pressure to leave their homes because the life quality and opportunities near their home areas have increased dramatically from what they were even 15 years ago. I believe that this will reduce the psychological and social problems that many young people feel if they have little choice but to move to big, distant cities. And it could ameliorate many of the problems faced by lower-paid migrant workers in those cities by giving them alternatives.

It is a massive task, but I think that transforming rural areas and small towns is a crucial part of creating a sustainable path for the overall Chinese economy going forward. The countryside can be a producer of a wide variety of industrial and agricultural products and could be the source of many new innovations. The newly affluent rural areas also serve as a large source of demand for industrial products. And agricultural productivity ensures that China's huge population can be fed.

---

[36] Cited in Rebecca Marighella, "China View: China's Western Development Strategy," *Modern Treatise*, November 23, 2023. https://www.moderntreatise.com/international/2020/11/17/china-view-chinas-western-development-strategy.

In this benevolent cycle, rising rural production leads to rising rural incomes leading, in turn to adequate demand to support both rural and urban industry. The key to long-term sustainability of this cycle is rising rural wages or small business returns.

The rural revitalization programs have completely eliminated extreme poverty (by the UN definition of less than $1.90 per day). But anything even approaching this kind of poverty is rare. In the huge majority of the country, villagers now live in very nice, large homes and the villages are comfortable and connected. But it is important that rural revitalization does not fall into the trap of just creating nice retirement villages for elderly farmers—agricultural productivity increases are essential.

A key part of the rural revitalization process is greatly improving general sanitary and environmental conditions, (including, famously, public toilets) plus the education level of the farmers. A November 2021 article in Qiushi, the official website of the CPC Central Committee, emphasized the government's traditional role in public education and culture:

> We need to enrich rural resident's pockets, but we also need to enrich their minds. We must raise cultural and ethical standards in rural areas, continue to discourage undesirable customs and habits, and foster civilized villages, fine homes and honest individuals, in a bid to achieve both material and spiritual prosperity.

The article stressed the need to maintain traditional village layouts and "the roots of China's farming culture" and continued:

> China has always had a large agricultural industry of small-scale farms. To promote the prosperity of rural residents and areas, the priority should be to increase the adoption of modern agricultural practices among small-scale farmers….We also need to improve the system of rural ownership rights and the market-based allocation of factors of production to give farmers more property rights and stimulate the vitality of resources and factors of production in rural areas.[37]

As part of the rural revitalization programs, the government has implemented a series of property rights reforms that allow villagers to lease their lands to agricultural companies. Thus, large tracts of land can be assembled that allow the use of equipment and technologies that achieve economies of scale and raise yields, especially yield per worker. Drones and other technologies that allow the precision use of water, fertilizer, and pesticides is now increasing yields and reducing pollution.[38] Some villages in China have already leased out all their lands, so they are more properly considered entrepreneurial villages because they are not very dependent on agricultural incomes.

A farmer in Yunnan did complain to me that the villagers see a new "shareholder" system as against their interests. He said that the villagers had already leased out their lands to several companies that farmed the land. But a "professor

[37] Tang Renjian, then-Minister of Agriculture and Rural Affairs, "Steadily Advancing Rural Revitalization," *Qiushi Journal*, 2022-01-18. http://en.qstheory.cn/2022-01/18/c_699066.htm.

[38] Joshua Bateman, "Increasing China's Food Supply—With Drones," The Diplomat, November 11, 2016, https://thediplomat.com/2016/11/increasing-chinas-food-supply-with-drones/.

from Beijing" came to the village instructing them to form a corporation of which each villager would be a shareholder. The previous leases were abrogated, but the new company has accomplished nothing and the land is now idle. In the view of the villagers, this kind of forced corporatization is little different from collectivization. It removes each villager's control over his own land.

There is a large debate about the nature and extent of rural land ownership rights (especially the right of a farmer to sell his property permanently). Some advocate giving the farmers full fee simple property rights and others fear the destruction of social norms and the possible exploitation of farmers.

Some third and fourth tier cities (Jiaozhou, Shandong province and Wuhu, Anhui province) are experimenting with plans that allow farmers to sell their village plots and buy an apartment in the city. Part of the motivation for this policy is to increase demand for housing in those cities, thus possibly alleviating the property slump.[39] Chengdu, the capital of Sichuan province, recently established the Chengdu Rural Property Rights Exchange "to promote the reasonable flow or property rights and realize the orderly circulation of rural capital…".[40]

Such policies are also a way to solve the problem of abandoned villages. From 1990 to 2021, the total number of inhabited villages in China fell from 3.773 million to 2.63 million, implying that over a million villages were simply abandoned. Professor Wang Weiran of Qingdao Agricultural University found, in a survey, that the vacancy rate of agricultural houses exceeded 21 percent. So, it is clear that many villages are uneconomic.[41]

Yet, I fear that privatization or quasi-privatization of agricultural and other rural land could have long-term deleterious effects on both farmers and the city. One problem is that many farmers considering selling their lands may not have the education level to understand whether they are being offered a decent deal. In the US, there are many financial companies which have the business model of exploiting financially ignorant or poor people. For example, "pawn your car" companies make short-term very high interest rate loans that can destroy lives—many poor people take out such loans and end up losing their car, which is their only way to get to work—starting a vicious cycle into deeper poverty. Stopping farmers from permanently selling their land is a key way to prevent such exploitation.

In this regard, I was heartened by press statement issued by the Information Office of the State Council during the Third Plenum of the CPC on July 24, 2024 by Han Jun, Secretary of the Party Group of the Ministry of Agriculture and Rural Areas:

> The right to use a homestead is defined very clearly in law. The right to use the homestead is the right enjoyed by the members of the rural collective economic organizations, that is to say, the members of the non-collective economic organizations have no right to obtain or obtain in disguise. All the laws are very clear on this point, and the policy requirements are very clear. At this point, there can be no opening or modification in any form.

---

[39] Zheng Shan Chen, "A historic moment! Encouraging farmers to sell homestead. What signal?" WeChat zsnc-ok, 2024-06-30.

[40] Xinhua News Agency, October 15, 2023.

[41] Zheng Shan Chen, op.cit.

> It is strictly prohibited to go to the countryside and use rural homestead to build villas and private guildhalls, and it is strictly prohibited to allocate homestead to retired cadres and workers for building houses. The decision of the Third Plenary Session of the 20th Central Committee is very clear that the current policy allows farmers to legally own housing through rental, shareholding, cooperation and other ways to revitalize the use of this area can be actively explored, so that farmers enjoy more dividends of reform.

Also, the countryside is a valuable resource for city dwellers. It gives them and their children an outlet to enjoy nature, improving physical and spiritual health. Yuxi, Yunnan, where I currently live, has a nearby mountain called Longmashan. It is part protected parkland and part farmland. It is hugely valuable for the health and well-being of the city's people. If it were in the US, the land would likely be occupied by large homes of the wealthiest people, who would find ways to keep the *hoi polloi* away from the mountain. Even in the mountains north of Beijing I once encountered a luxury resort being built so that it blocked an access road into the mountain parkland. But people need a place to walk and roam about.

My hometown of Clarksville, Tennessee has very little open land where people can just go out and walk and hike. Most roads do not have sidewalks and are not safe for walkers. When I was a teenager 50 years ago, there was still a lot of unoccupied forest land where I could walk around. When I visited the same places in 2023, I found lots of no trespassing signs. While hiking along a river, a rude man came to threaten me if I did not leave. Even on a public road in a somewhat upper middle-class neighborhood, creepy guys in black golf carts repeatedly stopped to ask me, "Can I help you? What house do you live in?"—meaning that they wanted me to know I was not welcome to walk there. This kind of land-use policy is one reason Americans have become so unhealthy and obese.

The Chinese population also has a problem with chronic diseases. Though most Chinese look relatively fit, the diabetes rate in China is surprisingly slightly higher than that in the US. Chinese cities are now in the midst of a boom in building city parks, partly to help fix this problem. But nearby open villages and farmland can also help.

Maybe more importantly, Chinese diabetes is largely driven by excess consumption of processed white rice, white wheat flour, and other grains. Many farms are near enough a city to provide healthy, fresh, and local vegetables, fruits and meats to the city population in farmers' markets. Such products are profitable to farmers since health-conscious city-dwellers will pay a premium for them.

The solution for near-abandoned villages will vary from region to region. Some might become homes for digital nomads or artists. Some might become prosperous truck farms. Some are vacation areas. Some might become national parks. Some will concentrate on agriculture and light industry, using the latest technology. I would hate to see these areas go the way of the closed-off lands that dominate my home country.

Providing more widespread banking support for rural industry and farming would be beneficial, especially during the stage when a business is moving from the startup stage to a medium-sized company employing more than 50 people. But planners are properly wary. It might seem beneficial to allow farmers to use their land as collateral, but it is likely that many farmers could be exploited by financiers and eventually left with no income and no land. In the US, many financial companies and products are designed to prey upon the short-term needs or desires of poorer people—leaving them destitute in the long-term. It would be better for general prosperity and social cohesion for governments to prevent them from "selling their birthright for a mess of pottage."[42]

Furthermore, Chinese rural areas are not actually very short of capital since many small businesses finance themselves through retained earnings and self-production of buildings, a form of capital accumulation that never goes through the banking system and therefore is not counted in national income statistics.

It would be a bad mistake to foist anything like the current US financial system on China, just as it was disastrous for the US Midwest when the New Deal banking system was replaced by the current "neo-liberal" system.

Entrepreneurs vs Unternehmers

Of course, most businessmen are, and should be, working to make themselves and their families better off. But I do think there is a fundamental difference between traditional businessmen who see themselves as a part of their communities and modern entrepreneurs who are solely trying to maximize their own incomes. Chinese rural businessmen are very much a part of their communities and appear to feel some responsibility for the benefit of their village or small town.

The proto-typical Silicon Valley entrepreneur sees himself or herself as a genius inventor and businessman, a "master of the universe,[43]" who claims to change the world and draws capital and labor from around the world. This type of entrepreneur seeks to be a citizen of the world, not of some particular city or town.

Strangely, the English language does not have a native word for the founder of a small, innovative business. "Entrepreneur" sounds very French. I think it does a poor job of describing most small businessmen in China (and also in the US and elsewhere). Theories of economic growth, deriving from the Solow model, assume that continued economic growth must depend on technological change. But many businesses that improve lives are not based on new technology.

The kinds of businessmen historically found in Chinese rural areas and small cities are so different from this new entrepreneur prototype that a different word is needed to describe them. I have been unable to find a suitable English word, but I think the German word *unternehmer* is descriptive. Meaning "undersigned" or, less literally, "My name is on this," German small and medium-sized businesses have historically been tightly intertwined with their home location. The *unternehmer* is typically a leading citizen of his city or village. He hires his employees from and

[42] See the story of Jacob and Esau in *Genesis* 25:27–34.

[43] See Tom Wolfe's 2002 novel, *Bonfire of the Vanities*, Farrar, Straus and Giroux, 2002.

invests in his home location. Germany's history of being divided into many small independent states reinforced this connection between the business and its home area.

Chinese small and medium-sized businesses have been historically and are still more like *unternehmers* than like Silicon Valley entrepreneurs. Most of the businessmen aspire to be leading people in their hometown and have very particular knowledge and expertise in their area. Although they certainly are not always benevolent bosses, many feel some responsibility for their workers and have pride in their contributions to their communities. This is the kind of businessman who was present in China's rural areas throughout most of history and who is becoming increasingly present today.

Fei Xiaotong argued that family-run companies and rural industry based around households is "consistent with Chinese cultural values and Chinese social psychology."[44] This kind of development is certainly happening in rural China now. Almost every farm family I have seen has some kind of small business—construction, trucking, restaurants, light industry, and so forth.

In the US, many businesspeople are still *unternehmers*, but large businesses are increasingly being dominated by financialized, globalized oligopolists. These large companies see their total obligation to be to their capital owners, with no obligations to their workers, wherever located. This is a very different social and moral view than that of traditional unternehmers.

In his *Critique of Judgement*, the late eighteenth-century German philosopher Immanuel Kant argued that progress is accomplished through "genius"—meaning a unique capability to produce the beautiful or sublime.[45] The implication is that unique individuals are able to be creative separately from the society in which they live. Although Kant was writing about art, his ideas have implications for technical and business implications also.

In his very interesting and thought-provoking book *Mass Flourishing*,[46] the Nobel-prize winning economist Edmund Phelps uses the term "modern" to describe a society and economy that allows people to fulfill their innate need to be innovative. Phelps explicitly bases his argument on Aristotle's Nichomachean Ethics, which focuses on what people need to be fully human, not on Kant's "genius." Furthermore, Phelps' use of the term "grassroots" along with his earlier work on enterprises in Italy[47] (which are very embedded in their hometowns and led by *unternehmers*), shows that he is not focusing on the isolated genius. So, his arguments are not Kantian.

Phelps' work has been so influential, especially in China, that I think it is important to distinguish clearly between (a) his meaning of the term "modern" as being freed from feudal-like constraints from (b) the Kantian rejection of the capability of

[44] Fei Xiaotong, op.cit., p. 151.

[45] The Wikipedia discussion of Critique of Judgement is actually useful. https://en.wikipedia.org/wiki/Critique_of_Judgment.

[46] Edmund Phelps, *Mass Flourishing: How Grassroots Innovation Created Jobs, Challenge, and Change*, Princeton University Press, 2013.

[47] Edmund S. Phelps, *Enterprise and Inclusion in Italy*, Springer, 2002.

judgement and, by extension, the rejection of the importance of innovation being integrated into a society. The Norwegian painter Odd Nerdrum[48] argues that Kant's focus on the egoist genius, who is separated from society and who cannot be judged by any standard, led to the kind of "modern" art that consists of a banana taped to wall or a crucifix dumped into a Mason jar of urine.

Almost all economic development and society-benefitting innovation has been driven by the kind of *unternehmer* found throughout rural China (and in other countries) throughout history. In contrast, many of the finance-driven Kantian entrepreneurs have founded companies which have the primary goal of becoming oligopolies and have resulted in a declining standard of living for average people in the US.

Examples of Chinese Rural *Unternehmers*

A major goal of the Chinese government is to provide broadband internet throughout the country, including to remote rural areas, which could, in turn, allow the development of new types of industry and commerce. A 2019 document issued by the State Council, "Digital Village Development Strategy Outline" set the goal of providing a wide range of digital services to every village, including precision agriculture, remote medicine and education, policing, and commerce support. By the end of 2020, 98 percent of villages had 4G coverage, many had 5G and other broadband service.[49] Millions of people are already taking advantage of this infrastructure to build small companies that sell directly to customers through e-commerce.

I've had a chance to meet young entrepreneurs around the country who have started businesses in their home villages or in nearby small towns and cities. Many have transformed their own lives, plus the lives of their families and employees. But many challenges remain. Elderly people have difficulty using technology. Plus, many young people, especially in minority ethnic groups, have little concept of how to start a business.

It is not clear that the Chinese migration to the cities is permanent. Many young people spend years working in a city to save start-up capital to start a small business in their home area. Now, even city-based young people are moving to rural areas, where their lives might be more comfortable or meaningful.[50]

Many businessmen in rural areas have saved money and developed experience while working in big cities. More than 5.7 million people, including 4.5 million migrant workers have moved to rural areas to start businesses, according to the Ministry of Agriculture.

---

[48] Odd Nerdrum, "Immanuel Kant Changed our Heads," https://www.youtube.com/watch?v=EcjVXBXn7b4&t=29s.

[49] Sam Davies, "Data Farming: How Digitalization is Changing China's Villages," *The World of Chinese*, November 9, 2022.

[50] Professor Wen Tiejun of Renmin University pointed out the importance of this in a conversation in April 2024.

I talked with a young man who had returned from working in Shanghai to start a company in his small home village in a mountainous area of Jiangxi province. By growing Chinese yew trees and selling them online, he's now making good money and has a very nice house.

In Yunnan province, a middle-aged man initially earned his money running a bakery in a small town. More recently, he started a small company with four employees raising rabbits. That company provides a very good living for his family and his employees.

I also had a chance to visit the Dounan flower market, which is located south of Kunming. This is very large commercial venue for sourcing and distributing flowers to florists around China. In the area around Kunming, much land has been converted to growing flowers, which yield a higher profit than other crops. I talked with two elderly ladies at the market who said that their incomes had doubled after they began growing flowers rather than vegetables. One middle aged man recounted that he got his start selling flowers on the street in Guangzhou. He saved enough money to move to Kunming and opened a business assisting farmers to convert their fields to flowers and then brokering them through the market—he is now a millionaire. Such stories are now common throughout the country. None of this would have been possible without large government investment in roads, in the airport needed for same-day delivery throughout the country, and in telecoms infrastructure.

Many villages sell specialized agricultural products to customers around the country, and by selling online they cut out middlemen who previously took a large share of the profits. The big Chinese tech companies, especially Alibaba and Tencent, have business divisions focused on helping villagers market their products to specialized customers nationwide. Many villagers have social media followers and customers numbering in the millions. These kinds of e-commerce have opened up new entrepreneurial opportunities that allow farmers to increase their incomes.

Fertilizer and Pesticide Use

During the Spring planting season in 2023, I hiked with my dog through farmland near Yuxi, Yunnan. That evening, the dog started having seizures and crying in pain. I rushed her to the veterinarian. Her heart stopped three times and was started again with CPR. Fortunately, a senior veterinarian was present who guessed that this was caused by organo-phosphate fertilizer. The vet gave her the antidote but told me that she only had a 20 percent chance of living. Fortunately, she did survive and is okay, but I hate to think that the same thing could happen to children or adults. Of course, there may be systemic effects on human health from long-term exposure. China's farmlands are beautiful, but this experience makes me wary of walking through them.

Chemical use on Chinese farms is now (as of 2020) 2.5 times the world average per hectare of land.[51] That amounts to 30 percent of the world's fertilizers and pesticides on 9 percent of the world's farmland.[52] A 2018 study concluded that small farms use significantly more chemicals because they lack expertise and management capabilities. But 98 percent of the farms in China are still less than 2 hectares—many much smaller.[53]

The Chinese government is seeking to reduce the chemical overuse, through a plan started by the Ministry of Agriculture in 2015.[54] Perhaps, new technology such as precision agriculture using drones can reduce the current large amounts of poisonous fertilizers and insecticides used on farms. We can hope that the heavy use of such dangerous and expensive used of often important fertilizers and pesticides might be coming to an end.

Policy Recommendations

Now is not the first time that a Chinese government implemented policies focused on improving the lives of average people, especially those in smaller cities and rural areas.

The famous Song dynasty reforming prime minister Wang Anshi (1021–1086) tried to implement a comprehensive economic and governmental reform designed to support average farmers, merchants and proto-industrialists.[55] He reformed land ownership and his Green Sprouts Act of 1069 offered farmers the operational financing they needed each year at reasonable interest rates, instead of borrowing at ruinous rates from usurers. He also focused on breaking up monopolies.

Much like today's emphasis on Rural Revitalization, Wang believed that reform was necessary not only for the good of the farmers themselves but also for the country's overall economic and governmental health. In the words of Song dynasty scholar Dieter Kuhn,

> His economic program was meant to support farmers, traders, and craftsmen at the wide base of the social pyramid. Wang was convinced that the state as a whole would become strong when the livelihood and well-being of the common people was assured and when

[51] Steffanie Scott and Zengzhong Si, "Why China is emerging as a leader in sustainable and organic agriculture," *The Conversation*, April 9, 2020.

[52] Nerissa Hannink, "Overuse of fertilizers and pesticides in China linked to farm size," Stanford Doerr School of Sustainability, June 18, 2018. https://sustainability.stanford.edu/news/overuse-fertilizers-and-pesticides-china-linked-farm-size.

[53] Ibid.

[54] C.F.A van Wesenbeeck et al., "Can China's overuse of fertilizer be reduced without threatening food security and farm incomes?," *Agricultural Systems*, volume 190, May 2021. https://www.sciencedirect.com/science/article/pii/S0308521X21000469

[55] See Dieter Kuhn, *The Age of Confucian Rule: The Song Transformation of China*, Cambridge, Massachusetts: The Belknap Press of Harvard University. "Chapter 3: Reforming into Collapse."

> local communities prospered. He wanted healthy, affluent citizens who willingly served the interests of the state.[56]

Wang's reforms were killed by a combination of usurious, monopolistic money lenders, entrenched landlords, deep-state eunuchs and other court officials. Ironically, by thwarting the reforms, the entrenched interests so weakened the average people that the dynasty did not survive wars with the northern nomads of the Liao, Jurchen, and, finally, Mongols.

During the Song dynasty, many Chinese farmers fled from their traditional homes in North China to land in the South that was previously uncultivated and thus unclaimed by landlords. This was despite the fact that much of southern China is mountainous and more difficult to farm than the flat lands of the North China plain. In many ways, this movement of Chinese farmers to lands where they could claim their own plot reminds me of the rush of American farmers to the unclaimed lands of the Midwest after the Northwest Ordinance of 1787 gave them the legal right to do so.

The idea of making reasonable, non-monopolistic financing and market-access available to farmers is important around the world. I once attended a meeting at the Bombay Commodity Exchange in Mumbai, India. The head of the exchange showed a short video depicting a poor farmer trying to raise enough money for his daughter's dowry. The exchange, which is a government-owned entity, had set up offices around the country which offered reasonable financing and which would purchase farmers' grain at world commodity prices. The farmer tried to make many trips on his bicycle to bring his grain to the BCE's office but was threatened and beaten up by local grain merchants and usurers. The plight of the poor farmer was so moving that the head of the exchange had to leave the room crying.

China once had problems similar to this as late as the early 2000s.[57] But, the current government's anti-corruption, rule of law, and anti-monopoly policies have sharply reduced the opportunities for local corruption and monopolization. Also, Chinese farmers now have good access to transportation and information, including the market price of their production. The Agricultural Bank of China, the largest bank in the world by assets, has a chief mission of making operating financing available for Chinese agriculture at non-usurious interest rates.

The success of these reforms shows the difficulty of classifying Chinese economic reforms as "market vs non-market." Government-built roads, State-Owned Enterprise-built telecoms networks, and state bank financing have been essential for creating competitive markets throughout China. It is difficult to see how these market-creating programs could have been pushed through without the Communist Party of China's emphasis on building a cadre of highly professional, non-corrupt and non-local senior administrators.

---

[56] Ibid., p. 55.

[57] For a good depiction of local corruption in agricultural markets in the late 1990s and early 2000s, see Xavier Naville, *The Lettuce Diaries: How a Frenchman Found Gold Growing Vegetables in China*, Hong Kong: Farnshaw Books, 2021.

Further investment in healthcare and education is still needed to raise the living standards of rural people to be equivalent to those of the most successful city dwellers. Research by Scott Rozelle of Stanford University and his Chinese collaborators concluded that some simple investments such as free eyeglasses and nutrition classes could help raise living standards,[58] though many of the problems he lists that were significant 10 years ago have largely been ameliorated today.

In Yunnan where I live, there are already many new elementary, secondary, and vocational schools available to students. Within the next few years, it is possible that AI-based or remote telecoms technologies could make world-class education and healthcare available throughout China, supplementing the brick-and-mortar investment. This will need to be carried out by a combination of innovative private companies and needed government investment.

Similarly, many westerners often point out that Chinese farmers don't have fee-simple ownership rights to their land. They have the right to control the land, now they can lease it out, but they can't sell it on the market and thus cannot use it for collateral for loans. Isn't this anti-market? The Chinese government rightly fears that farmers would be taken advantage of by large monopolistic agricultural companies or by wealthy city-dwellers who would convert the land to vacation homes. Ironically, the naïve push for fee-simple ownership would likely lead to the monopolization of competitive agricultural markets.

The "free" American West is now quickly being bought up by very large oligopolistic corporations and tech billionaires, especially Bill Gates. The quality of life of locals is sharply deteriorating as these new, very large landowners deny local people access to land they previously used for hunting, fishing, or hiking. The new very large landowners are even trying to cut off access to public lands by surrounding them or by cutting access roads. From an economic point of view, the only reason billionaires and large corporations would covet the land is because they plan to derive future monopolistic profits by reducing competition in agricultural markets, so food prices will rise. Is this market-enhancing or market destroying?

In many ways, China's rural revitalization programs are currently working to re-establish the highly diversified and productive system which existed at times in early modern and medieval China and during the "land to the tiller" and traditional village enterprise eras of recent Chinese history. The big difference this time is that infrastructure and technology now allow people in remote areas to interact easily with the large cities of the East Coast. In May 2021, the State Council issued an updated "Go West" strategy that encouraged innovation, industrial modernization, further infrastructure investment and integration of urban and rural areas.[59]

For many young people, excellent transportation and communications infrastructure reduces sharply the isolation of living away from very large cities. Creating better job and entrepreneurial opportunities with sharply higher living standards in

[58] Scott Rozelle and Natalie Hell, *Invisible China: How the Urban-Rural Divide Threatens China's Rise*, University of Chicago Press, 2020.

[59] Jones, Lang, LaSalle, op.cit.

rural areas and small towns reduces the push to leave their home areas. This allows them to remain close to their families, which is an important component of Chinese traditional culture. In the next decades, young people will have less incentive to move for either high quality or low wage jobs. China is even beginning to see young urban professionals leave the largest cities for the cheaper and more comfortable lifestyles available elsewhere. We are likely to see a lot less of the brain drain that harmed rural China during the decades of the 1990s and 2000s.

At the same time, because of rising incomes and growing opportunities for young people, China also has to re-orient Chinese agriculture away from the historic Asian labor-intensive, small plot system to high tech agriculture that takes advantage of economies of scale (while still protecting the property rights and social safety net of rural residents.)

This won't be easy. Small towns and villages face increasing fiscal pressures and there is still a substantial urban-rural cultural and economic divide. But, I think China's long-term growth prospects are dependent on making this transition to a system of villages, small towns, regional cities, and very large cities similar to the system that characterized historic pre-"Century of Humiliation" China and the American Midwest during its golden century.

Chapter 6
City Life

Life in a Jiayuan

I live in a typical Chinese high-rise apartment yard, what is often called a “jiayuan,” family garden, in Chinese. More formally, these apartment complexes are called “xiaoqu,” small districts, but I prefer the more poetic jiayuan.

In my jiayuan, there are 28 buildings—eight are 26 to 30 stories tall. The remaining 20 are 8 stories tall. Since there are two apartments per floor, that amounts to roughly 768 apartments and 2500-plus people. Most apartments are three bedrooms, with a total space of about 175 square meters (1750 square feet). Apartments on the highest floor are generally two stories and those on the ground floor have a basement and a private yard, so they are about 320 square meters. In several nearby jiayuan, there are four apartments on each floor, each with roughly 100 square meters (1000 square feet) of floor space, so more affordable apartments are available as part of the same neighborhood.

This area is part of a larger construction project built in the late 2010s as part of an extension of the urban area of Yuxi—essentially a new downtown. There are five similarly sized jiayuan going north along a main street. All of these buildings are made of concrete and steel, so, unlike American apartment living, I have never heard my neighbors’ televisions or music. Each jiayuan is gated, with security guards who allow only residents, workmen, or other authorized people to enter. The yards are all highly cultivated with lots of trees and flowers, usually a running track, some outdoor exercise equipment and a children’s playground. One of the jiayuan has a senior citizen’s center with ping pong and card tables.

It is a real joy to go down to the yard in the afternoon to see the children playing—riding their bikes and scooters, running around and playing. Older people gather to play cards and gossip. Younger people are jogging, walking their dogs and feeding the cats. Couples stroll hand-in-hand. This kind of organic community gathering is very different from an American suburb, where children have to be closely

D. Blair, *How Nations Succeed*, China and Globalization,
https://doi.org/10.1007/978-981-92-2059-5_6

monitored and have to be driven to a playdate, though it does sound like the life my mother describes when she was growing up in the 1930s and 1940s.

Lifestyles in these jiayuan achieve the ideals of the "new urbanist" architects who try to design neighborhoods that encourage natural community. (See, for example Seaside in Florida, Kentlands in Maryland, or Poundbury in England.)[1] Unfortunately, most of these new urbanist neighborhoods outside China are smaller than economic scale. They do not have daily necessities within walking distance and they have no employment, so people have to drive long distances to work. In reality, most of them have become either vacation resorts or slightly nicer-than-usual upscale suburbs.

China's more densely populated jiayuans might not be as beautiful architecturally, but they are more economically viable and provide more of the walkability, convenience, community life, and access to transport the new urbanists are trying to achieve. Amongst the jiayuan, there is a car-free walking street with retail spaces. This is exactly the kind of urban planning that Western advocates of a more walkable and livable environment dream about. Life is good.

My jiayuan and the surrounding area are good examples of what makes life in China convenient, pleasantly community-oriented, and affordable. More generally, Yuxi has done a great job implementing livable city planning and in building the infrastructure that improves average people's daily lives. Yuxi people can live a good lifestyle very affordably.

Beijing is also a city of jiayuan. Foreign city planners often criticize this system for creating long city blocks, which supposedly make walking less pleasant. Some foreign architects don't like their style and criticize them for being too tall. Foreigners who have never set foot in a jiayuan apartment sometimes describe them as dehumanizing "chicken coops in the sky."

The reality is that they are very pleasant for the people who live in them. They are convenient with everything needed for daily life within easy walking distance—food stores, dry cleaners, shops, restaurants, often kindergartens and elementary schools. There is also almost always a subway station nearby. Within the jiayuan, there are children playing freely in the yard almost every day and old people are chatting or playing cards, mahjong or chess.

The only inconvenience is that many people will have to commute to work. With two workers in a family, it's usually not possible to live near both jobs, but that is true all around the world. Yet, because of the local conveniences near each jiayuan and because of excellent public transportation, most families need to own at most one car—saving a lot of money. For city governments, it is much cheaper to provide utilities, transportation and amenities to jiayuan rather than to houses in widely scattered suburbs.

Some people would hate this lifestyle. They want a large plot of land, far from any neighbors. Personally, I prefer this lifestyle to American suburbs. American

[1] Wikipedia has a long list of new urbanist communities around the world. https://en.wikipedia.org/wiki/List_of_examples_of_New_Urbanism.

houses have lots of high cost and continuous maintenance. I could go the rest of my life without mowing a lawn or repairing a roof. But, if you want that kind of lifestyle in China, you can have it. I once looked at a nice courtyard house in the country about an hour, in good traffic, north of Beijing that was being offered for lease for 20,000 RMB ($2900) per year. There is countryside within ten kilometers of Yuxi. (In these cases, you would have to lease from a farmer because agricultural land cannot be sold.). On the other hand, it would be hard to find a jiayuan type of lifestyle in the US because many apartment buildings are infested with crime and are so shoddily built that it is impossible to avoid overhearing neighbors with loud TVs.

Architects will notice that Chinese jiayuan are basically the same as the very famous French architect Le Corbusier's "towers in a park." Almost everywhere these have been tried outside of China, they have been a disaster. Often, they quickly become rundown, dangerous, unpleasant places to live. Many have been torn down. Why do they work in China but not in the US or Europe? I think the answer comes down to culture. Chinese are more used to getting along with neighbors, who share a common culture.

Problems in the Housing Market

My jiayuan does demonstrate some of the current economic problems with real estate. The housing boom was mostly productive in that it has created much needed high-quality housing, but it went on too long. Now, Yuxi's housing stock is clearly over-built.

When I moved in, I imagined the walking street would be filled with activity, maybe it will be in the future but it is now half deserted. A lot of this is due to the oversupply of retail space. Even in a fairly densely populated area, there is only so much demand for coffee/tea/bubble tea shops, small convenience stores, print shops, hairdressers and noodle restaurants. Yuxi already has a very vibrant and very walkable old downtown, plus it has lots of very active and cheap farmers' markets, but there does not seem to be enough business for another downtown. Also, there are lots of empty apartments and some uncompleted projects that have simply stopped construction.

I happened to meet the developer who built these jiayuan, call him Jiang (not his real name.) He approached me when I was having breakfast at a hotel that he owned in the complex. Then he invited me to have dinner with him and his 25-year-old mistress. His wife and daughter live in Australia.

He also was building an outlet mall in the middle of the complex. Jiang said that he hoped to attract customers from the much larger city of Kunming, which is about 100 kilometers away, even though Kunming already has lots of outlet malls. Jiang showed me around the mall, which seems to be structurally complete but is unfinished raw concrete. A bit later, sometime in late 2023, I bumped into him again and asked him when the mall would be completed. He responded, "no money."

The next thing I heard was that Jiang has fled to Australia and work on the mall has stopped.

It would be nice to have the mall in the neighborhood—many older people might have gone there every day. Plus, the mall traffic would have revitalized the smaller shops on the walking street. But I don't think there is enough retail demand in Yuxi for another mall. There are already two large malls nearby and a Walmart/mall further south, about 20 min drive away. Even apart from current economic difficulties, the shift to e-commerce has permanently reduced the demand for retail space all over the world.

We paid 3 million RMB, roughly $450,000 dollars, for our 320 square meter (3200 square feet) apartment at the peak of the cycle in 2021 and then spent almost another million RMB remodeling it. At that time, smaller, roughly 100 square meter, apartments in other nearby Huayuan sold for 600,000 RMB, roughly 86,000 US dollars. In retrospect, it was a stupid financial decision to buy a property in 2021, though we did buy the apartment for living, not for speculation.

This is a high price. At current exchange rates, it would buy a pretty nice house in places in the US that are comparable to Yuxi. The high cost of purchasing housing is the major exception to the overall strategy of making life affordable for average Chinese. It was partially exacerbated by a cultural preference to own property. For example, young women (and their families) are reluctant to marry a suitor who does not already own an apartment. It is also partly due to the undeveloped rental housing market in China—most rental apartments are owned by a single, private landlord. There is little parallel to the corporate-owned rental buildings in the US. But the primary driver of high housing prices was the abundant investment capital of the 2010s and the fact that average people had few other places to put their savings.

The mispricing in the housing market is shown by the disparity in purchase prices and rental prices. Rents come nowhere close to covering capital costs—a situation that is only justifiable if owners expect future sales prices to rise sharply. After buying my apartment, I met a couple who are renting a 150 square meter apartment in the jiayuan for 2500 RMB per month, roughly 360 US dollars. Earlier, for 12,000 RMB ($1700) per month, I rented a 3 bedroom, 150 square meter apartment in a somewhat-upper middle-class jiayuan on the north side of Beijing between the fourth and fifth ring roads. At that time, 2016–2020, its sales price would have been about 10 million RMB ($1.4 million). Any landlord is covering only a small portion of his total costs.

The prices have fallen sharply since then (2021 to 2025), maybe 30 percent in Yuxi, but I think they still have further to fall. This will be bad for me and other homeowners in China but will be very good for society by making reasonably priced, high-quality housing available to more people. Lower housing prices will make life much easier for poorer people and young people. It will focus investment on other real productive investments. Plus, it will encourage entrepreneurship because business owners can live more cheaply and they won't see housing prices increasing more quickly than their stressful and work-intensive projects.

China is now going through a very difficult transition period. The fall in housing prices has eliminated a lot of paper wealth, leading to a "wealth effect" shock to the economy. Lot of small companies in Yuxi that are devoted to home remodeling, construction, furniture and so forth will fail.

Policymakers will be tempted to use fiscal or monetary stimulus to raise artificially the price of housing, but that would be a mistake. As we have seen since the quantitative easing in the US, using stimulus to try to prolong an exhausted development model will just cause an unproductive boom/bust and will also redistribute wealth to already wealthy people.

Public Investment to Improve Quality of Life

The city of Yuxi recently built a large park which separates the older traditional part of the city from the newer section to the north. With a perimeter of about 8 kilometers and with two lakes, it is within walking distance of at least a third of the city's population. Another new large park with a waterfall is located on the east side of the city. A bit further south, near the center of the older downtown, there is another long-established park with small lakes, trees and a small amusement park. There are lots of smaller pocket parks scattered throughout the city. These parks are always busy with people. This kind of infrastructure investment shows no monetary return, but it improves the quality of life of most of the population. In short, the parks make it possible for people to live a good life inexpensively.

Yuxi is not unique. Beijing now has more than 1100 parks and plans to build 200 more in the next 10 years. The city is also building a very extensive system of greenways, walking and bike paths, reaching 7000 kilometers by 2035. Every neighborhood now has a nearby park and greenway—improving the health and the quality of life of the population.[2] I can attest that these parks and greenways are very important to creating a good quality of life in Beijing. Shanghai, Shenzhen, Chengdu and other cities have similarly extensive park and greenway systems.

China is also in the process of building the world's most extensive national park system. By 2035, it is planned to cover an area three times as large as the US national parks.[3] These urban and national parks are a large investment, but they have transformed the livability of Chinese cities and are protecting the environment.

Yuxi also has a recently completed high-speed rail station, on the Kunming to Vientiane line. It provides frequent connections to Kunming's central train station for 30 RMB (about 4 dollars) and also connects to China's extensive high-speed rail system. This makes it easy and inexpensive for average people, many of whom don't own a car, to travel easily, comfortably, and cheaply throughout the country. The plan is to connect to Singapore eventually. Yuxi also has two expressways, like

[2] Guo Yanqi, "Beijing introduces new policies to enhance parks," *China Daily*, January 13, 2026. https://www.chinadaily.com.cn/a/202601/13/WS69662d7da310d6866eb33792.html.

[3] "China's bold push to build the world's largest national parks system," *Payawaran,* June 21, 2025. https://paryawaran.com/2025/06/21/chinas-bold-push-to-build-the-worlds-largest-national-parks-system/.

American interstate highways, connecting Yuxi with Kunming. There are many private buses and car services connecting Yuxi to the Kunming airport, Kunming downtown, and other cities. Other expressways connect Yuxi with the rest of Yunnan and other provinces. As with transport infrastructure everywhere, the fees and ticket prices of the roads and railroads do not cover their capital costs, maybe not their operating costs. They may look low-return from a return to capital owners point of view, but they provide business opportunities for many people and also improve quality of life. This investment is very similar to the US investment in the Interstate Highway System in the 1960s and 1970s that led to the rapid growth in the American South.

Infrastructure has transformed Yunnan, which 20 or 30 years ago was isolated and difficult to reach, to a much more prosperous place with huge a huge tourist business. The railroads are making Yunnan into a transport hub for mainland Southeast Asia.

The Kunming Changshui airport, completed in 2012, has transformed the economy of the area. Much of central Yunnan, including land around Yuxi, is planted in flowers, which need to be cut and delivered to market the same day. The Dounan flower market, located between Yuxi and Kunming, has electronic sales of millions of flowers each day (similar to the Chicago exchanges) and is now the second largest in the world—after Amsterdam. Farmers tell me that their incomes have doubled because of the creation of the flower market. As is frequently the case, public investment enabled the creation of a sophisticated business ecosystem. The Kunming/Yuxi area is now a world-leading cluster in the flower industry.

There is a caveat. Yunnan now has excellent infrastructure, so additional investments are likely to be less transformative. The second expressway to Kunming added a lot less additional value than the first did. More parks, though nice, would likely be less beneficial than the past investments. Yuxi already has an excellent housing stock and does not need much more. As is stressed throughout this book, the investment-based development model which has been so successful in the past has now reached its point of fast diminishing returns. Future development will have to be based on taking advantage of the opportunities created by the old model.

Public Housing

About a kilometer from my jiayuan, there is a large, 15 towers, complex of city-owned rental apartments. Each apartment is small, about 80 square meters, 800 square feet, and costs roughly 500 RMB (about 70 dollars at current exchange rates) to rent. Despite their small size, they provide a good quality living arrangement for hundreds of less-wealthy citizens. There are other similar public housing complexes scattered around the city.

There is a farmers' market nearby, a grocery store, breakfast noodle places and other stores for daily necessities. There is even a strawberry farm. Recently, the city has started neighborhood restaurants named "New Era Happiness Canteens" that serve decent meals for around 10 RMB, approximately 1.50 dollars. All of this is part of the broader strategy to keep life affordable for everyone without creating a sense of entitlement.

In stark contrast to public housing projects in the US or Europe, these buildings are clean, safe and well-maintained. The life quality there looks like every other jiayuan in Yuxi. Why are these public housing projects so nice while they are so awful in many other countries?

I think it comes down to culture and social norms. There are, of course, poor people in China, but there does not seem to be anything like the hopeless and resentful underclass in the US or Europe. There are very, very few unwed mothers, so most children grow up with two parents. In contrast to what many foreigners might guess, there is not strict policing. There is so little violent crime that the police don't have much to do.

Urban Farm Villages

Apart from jiayuan, the other main housing type in Yuxi consists of villages of farmhouses. Many of these urban villages are legally agricultural and they once were actual farm villages, but they are now surrounded by the city.

These villages use a typical farmhouse construction style found throughout China. Each house is built on a roughly 100 square meter base and rises four or five stories, for a total floor area of 400 to 500 square meters. Most houses have a roof garden. Each village consists of several rows of houses with adjacent walls touching each other. Most families have three or more generations living together. They usually have jobs in Yuxi plus some kind of small business on the bottom floor. There is not a lot of actual farming, but the older people do use every inch of available land to grow vegetables. Younger people get jobs in the city, but they can live cheaply because their family home has plenty of space for them. These urban villages provide a very good lifestyle for many people in Yuxi.

When I first moved to Yuxi, I asked about buying or building one of these houses. I was told the land cost about 300,000 RMB and the house construction would be another 300,000 RMB for a total cost of 600,000 RMB, about \$90,000—great for a 400+ square meter house. Not so fast, I'm not a farmer, so I can't buy the house. It is possible to take out a lease, but I was warned that after I made improvements the original owner might just take back the house and I wouldn't be able to do much about it. Plus, I would be in a tight-knit village among families who had lived together for generations.

I do think that I should *not* have been allowed to buy one of these houses. If they could be bought and sold to people outside the village, they would soon be bought up by city people and the original families might be left with little. These traditional farmhouses are a kind of social safety net for many families. In rural areas, much of the land might be bought as vacation homes for very rich people from outside the area, as has happened in many Western states of the US.

Productive Cities

Cities are not only for living—they are also for productivity. As Chap. 7 below discusses, many cities' economies are dominated by industrial clusters that specialize in a product.

Yuxi has a small cluster of industries applying technologies and procedures learned from tobacco processing to agriculture more widely. And Yuxi does benefit from the Kunming-centered flower cluster, but most of the flower-related jobs in Yuxi are farmers with green houses. Farmers' incomes have been raised, but the flower cluster has not resulted in a complex network of supplier companies in Yuxi. There is a long-established cigarette factory in Yuxi that provides a lot of stable, high wage, employment—but much of the revenue goes as taxes to the central government or to Yunnan province. There are also some pharmaceutical assembly plants and mining in the surrounding mountains.

There are a lot of traditional small business people, *unternehmers*, in the city and the surrounding areas. However, there are not many jobs for ambitious young people, especially those with high-tech expertise.

Yuxi is a good place to live for most people and is generally prosperous. Most people can live well on average incomes. Even for most young people, it is a good place to live if they are willing to live a family-oriented traditional life. The overall strategy of making everyday life affordable and convenient has worked in Yuxi. But, like most small cities, it is probably not the place for the most ambitious young people.

City Finances and Debt

The Yuxi government, like that of many cities in China, is in debt and probably can't pay it back. I don't know the exact amount since city budgets are not public information, but it is a substantial burden. Almost all city government debt is owed to State banks, so any bailout will be one Chinese government agency transferring funds to another Chinese government agency. There will be large problems with any bailout, but that would be fairer than a government bailout of a private bank.

Much of the money was spent building infrastructure, which provide large benefits to the local population, but which provides little or no direct revenue to the city. Like public infrastructure everywhere, it has to be supported with taxes. City governments are also responsible for healthcare, education and other public services. Cities are largely funded by the national or provincial governments, not from direct taxes.

For several decades, many Chinese city governments raised funds from land sales and from loans (going through the transparent ruse of a special purpose entity since they are not allowed to borrow directly). Now, that funding model no longer works because there is not much need for more housing or offices and the demand for buildable land is now low and many cities have long passed any credible credit limit.

Many American cities and states are going broke because they spend so much on healthcare and various welfare programs that they have nothing left for infrastructure construction or maintenance. Chinese cities have already built excellent infrastructure. They will need substantial funding to properly maintain the current stock of infrastructure, but substantially less than was needed during the construction phase.

I hate to say it, but a small property tax would solve many city fiscal problems in Chinese cities. This will be politically unpopular and it very well may accelerate the fall in house prices since it will encourage people not to hold on to apartments. But it would stabilize city government budgets in the long term.

A key argument of this book is that governments at all levels need to avoid going into more debt to build more unnecessary infrastructure *just* as a stimulus program. That development model is largely over. Trying to maintain it will just impede moving to a new model based on technological upgrading and entrepreneurship.

Chapter 7
Clusters, Competition, and Real Innovation

China's Cluster-Based Industrial Ecosystem

In many industries, economies of scale are crucial to improving productivity, but too much scale growth leads to monopoly or oligopoly, wiping out the advantages of competition. This dilemma between scale and competition has haunted economic theory and policy since its very origins. In his seminal work on industrial clusters, Michael Porter emphasizes that clusters solve this dilemma by allowing industries to reap the benefits of economies of scale and of competition simultaneously.[1]

He argued that clusters affect companies within the cluster in three ways:

First, they allow/force the companies to increase productivity, both from close and constant competition and from the opportunity to learn from nearby companies that are competitors, collaborators, suppliers and customers all at the same time.

Second, clusters drive real-world innovation. Clusters of small businesses don't usually create basic science, but they are learning machines in terms of applications.

Third, they stimulate new business and entrepreneurship within the cluster. The simple fact of observing other people start businesses inspires many young people to give it a try. The dynamism in the cluster can lead to individual dynamism.

A 2014 World Bank study of aspirations in rural Ethiopia showed that being immersed in a dynamic economic ecosystem is important.[2] The study showed documentaries about successful efforts by "peers" to a group of young people (with no

---

[1] Porter, Michael E. 'The Adam Smith Address: Location, Clusters, and the "New" Microeconomics of Competition,' *Business Economics*, January 1998, Vol. 33, No. 1, pp. 7–13. https://www.jstor.org/stable/23487685.

[2] Tanguy Bernard, Stefan Dercon, Kate Orkin, and Alemayehu Seyoum Taffesse, The Future in Mind: Aspirations and Forward-Looking Behaviour in Rural Ethiopia, World Bank, 2014. https://www.worldbank.org/content/dam/Worldbank/Feature%20Story/Africa/afr-tanguy-bernard.pdf.

D. Blair, *How Nations Succeed*, China and Globalization,
https://doi.org/10.1007/978-981-92-2059-5_7

intervention in a control group.) The result was that the group who had the chance to see their peers succeed went further in education, worked harder, had higher incomes, and were more likely to start companies. If watching documentaries can achieve this, imagine what living in a cluster and seeing striving all around you can lead to.

This example illustrates the importance of what Edmund Phelps calls “dynamism,” which he defines as “desire and capability of a nation’s people to innovate.”[3] Desire, which often arises from the observation of successful peers, is just as important as capability. Being immersed in a dynamic cluster is much more conducive to developing people with dynamic spirits than working for a large corporation.

Clusters also deliver the advantages of a high-trust society and economy. Instead of having to rely primarily on expensive lawyers and slow court systems, clusters are mostly self-policing. Any player in the cluster who develops a reputation for cheating or low quality will quickly be shunned by everyone else in the cluster. In contrast, sadly, the US has become a highly litigious and very low trust society.

China’s economic history can be thought of as an exploration of the contrast between competitive clusters and very large integrated companies designed to take advantage of economies of scale. Utopian socialist works such as Edward Bellamy’s 1888 expository novel, *Looking Backward*, argued that economies of scale would make production so efficient that no one would suffer from shortages and people would have to work for only 25 years of their lives. Much Soviet or Maoist central planning was similarly intended to maximize economies of scale. The problem is that such scale creates all the disadvantages of monopoly and also ignores individual incentives and competition. It looked like there is an unavoidable tradeoff between economies of scale and competition, but clusters have turned out to be a way around that.

Sometimes, companies do seek scale to achieve economically efficient production levels, but they frequently seek scale just to become dominant in order to gain the market power from monopolization or oligopolization. China’s strong antitrust policy has been key to preventing monopolists from seizing all the economic profit in the system and thus killing the smaller companies in the clusters.

Obviously, there are some sectors where economies of scale or network advantages prevent small and medium sized companies from competing. A significant portion of Chinese State-owned Enterprises operate in such sectors that are too capital-intensive for smaller cluster companies. Or they provide public services essential to the rest of the economy. They can be thought of as regulated monopolies in the “commanding heights” of the economy—including telecoms, banking, energy, mining and a few others.

According to the Cheung Kong Graduate School of Business in Beijing,

[3] Edmund S. Phelps, “Mass Flourishing and Economic Dynamism,” *IMF F&D Magazine*, September 2024. https://www.imf.org/en/publications/fandd/issues/2024/09/point-of-view-mass-flourishing-and-economic-dynamism-edmund-phelps.

> (SOEs) are concentrating state economic power in upstream industries. Their size and position in the economy reinforces their role as policy tools—especially in the event of another crisis….SOEs tend not to operate in the downstream economy, where the most value and innovation are created today.[4]

They can be bloated, inefficient and politicized—like all monopolies everywhere. They have low return on assets, but maximizing return to capital is not really their goal. At their best, they provide abundant services and supplies to consumers and businesses at reasonable prices. For example, China's three big telecoms suppliers provide excellent connectivity at cheap prices everywhere in the country—a big contrast from the three monopolistic telecoms in the US. Unlike private monopolies, their goal is not to extract as much value from the system as possible. Private monopolies tend to kill small companies; SOEs can ideally be a support system for smaller, competitive downstream companies.

However, I have heard anecdotal accounts from private companies that SOEs, especially those owned by local governments and provinces, are recently inserting themselves into deals to extract rents without actually doing any work or providing any value. If this behavior expands, it could be very detrimental to the clusters that have made the Chinese economy so dynamic.

Porter's early examples of clusters—leather goods in Italy and winemaking in Northern California—had fairly simple supply chains. They did not have high rates of technical innovation, but they did create lots of business opportunities and jobs. There are many similar clusters in China.

For example, the city of Zunyi in Guizhou province produces 2.25 million guitars per year, one seventh of world production. Kicked off by a migrant worker returning from Guangzhou, with local government cooperation, there are now many companies at all stages of production, including 77 independent guitar brands. Starting with basic guitars, the Zunyi cluster has moved up market. As of 2023, the cluster had created 168 guitar-related patents.[5] Foreign guitar experts are now seeking employment in Zunyi. This industrial cluster has created lots of good jobs and shown opportunities to many local young people.

I visited Xiqianbo village in Hebei province, which has become a national cluster producing fishing rods. Starting from nothing in 2014, the village now has nearly a thousand small fishing rod factories and sells 10,000 per day, mostly though online live streams.[6] Former farmers in the area, have transformed themselves into innovative entrepreneurs in a decade. A village resident told me that not a single villager owned a car 10 years before—now, the streets are packed with Mercedes and BMWs.

---

[4] Tom Nunlist, "Piece by Piece: SOE Reform is Among China's Biggest Challenges," *CKGSB Knowledge*, November 1, 2017.

[5] "World's largest guitar production hub strikes the right chord," *China Daily*, August 4, 2024. https://www.chinadailyhk.com/hk/article/589788.

[6] Zhou Huiying and Han Junhong, "Neighbors discover group success online," China Daily, October 26, 2020. https://global.chinadaily.com.cn/a/202010/06/WS5f7bc7aca31024ad0ba7d481.html.

There are thousands of such clusters throughout China. They have brought out the dynamic spirit of hundreds of thousands of small businessmen throughout the country. Many don't have extensive education and some recently were near-subsistence farmers, but now they are prosperous. In many ways, these businessmen are successors to the traditional businessmen, who I called *unternehmers* in Chap. 5, that have been the basis of the Chinese economy for centuries. They may not be pushing high technology, but they are doing a lot of business-model and product innovation and are providing opportunities and jobs for millions.

The area south of Kunming, extending to Yuxi, has a large cluster—flower production. Much of the land in this area is covered with greenhouses. The former village of Dounan, just south of Kunming city, is home to the world's second largest electronic flower exchange. It has a trading floor similar to the electronic commodities exchanges in Chicago. I have talked with businessmen who invest in flower production and can trade hundreds of thousands of roses per day. For example, one man sold flowers on the street in Guangzhou, became interested in the business, moved to Kunming to start a flower growing and trading business and now is a multi-millionaire. Local small farmers tell me that the flower business has doubled their incomes. This would not have been possible without dynamic people who found or made opportunities for themselves, but it also would not have been possible without the Kunming government's investment in a large airport that can efficiently move highly perishable flowers to markets around the country.

These one-industry clusters have been important in raising millions of people out of poverty, but they are not as unique as the very sophisticated and technologically innovative clusters of clusters that are found mostly in Guangdong and Zhejiang provinces, but which are now also developing in inland areas such as Changsha, Chongqing and Chengdu.

These clusters of clusters are learning machines. I predict that these clusters will be able to apply any advantages to AI better than large companies and better than anywhere else in the world. They may not create the world's fastest chip and they might not have an LLM that maximizes some metric, but they will figure out how to apply these tools to real production. Much of the world's electronics comes from these clusters of clusters and I expect that they will come to dominate applications for new technologies.

Maquiladoras vs Clusters

During the debate over the North American Free Trade Agreement in the early 1990s, Chinese manufacturing was not really on anyone's radar. The expectation was that opening up US markets would result in manufacturing moving in search of low wages from the US to Mexico, not to China.

US companies opened large assembly plants, called *maquiladoras*, in northern Mexico, close to the US border. Their sole purpose was to take advantage of wages in Mexico, which were much lower than anywhere in the US. These were purely low-tech assembly plants. Most of the inputs and all of the technology, design and control was in the hands of the US parent companies. Industrial clusters have not grown up around these plants. They create jobs, but they do not create an ecosystem, a cluster, of suppliers and producers. They have not led to innovation and have not created networks of entrepreneurs around them.

When China became important in foreign direct investment, in the late 1990s into the 2000s, the expectation was that foreign investment into China would just result in the creation of *maquiladoras*, certainly not the kind of world-leading clusters of clusters we see today. (Why Mexico was unable to develop local innovation or production clusters is a topic worth a lot more research.)

Local supply chains in China may have started originally to support foreign maquiladoras, but Chinese businessmen used the opportunity to learn technology and business practices. Competition among them forced them to learn fast. The development of clusters allowed them to combine competition with economies of scale.

Maquiladoras are easy to move, clusters are impossible. China's clusters of clusters are a highly complex ecosystem that would be impossible to replicate, even given a decade or more. Lu Feng, a well-known professor of political economy at Peking University, argues that a large and diverse industrial ecosystem is the primary driver of scientific and technical innovation. He says that "China's vast industrial base will give it an edge in AI through a positive feedback loop between real-world industrial applications and foundational AI models."[7] He continues:

> Industry is not something that can simply be relocated like a factory building. At its core, industry is an organizational and social capacity. It is this capability that determines how effectively physical assets are used. The key point is this: organizational capacity cannot be transferred…Today, China remains the only country in the world with a complete industrial system.

Many companies in Zhejiang and Guangdong provinces are now prototypical Adam Smithian entrepreneurs or *unternehmers*. In the meantime, Americans have forgotten how to be entrepreneurial in the manufacturing sector. Any re-shoring of American industry is likely to be assembly plants of large multi-national companies (similar to the foreign investments in China or Mexico in the 1990s) and is unlikely to lead to the development of local clusters.

President Trump's trade policies may force large companies, especially European companies, to locate new factories in the United States. These factories may create blue collar jobs, but they are mostly just maquiladoras. For example, the large BMW and Mercedes Benz plants in South Carolina and Alabama are important local employers but they have not led to the creation of vibrant local clusters related to the automobile industry. The new TSMC site in Arizona also appears to be just a maquiladora, with its technology and advanced inputs coming from Asia.

---

[7] Kyle Chan, Thomas Des Garets Geddes and Ailsa Brown, "Chinese industrial maximalism: Lu Feng," *High Capacity*, June 19, 2025. https://www.high-capacity.com/p/chinese-industrial-maximalism.

Silicon Valley has long been the prototypical example of a cluster. It still has a large concentration of skilled workers, venture capital firms, and large tech oligopolies. Until the mid-2000s, the Valley was dominated by a huge number of small, competitive startups that were hoping to grow into large firms. The Obama administration decided to consolidate the companies in Silicon Valley into a small number of very large companies and to stop future competition. Now, it is dominated by a handful of large oligopolies that either buy up small firms or copy their innovations.

Silicon Valley has become a node in a globalized supply chain. So far, it has been the node that has been able to extract the most value out of the system. But it no longer has the manufacturing capabilities necessary for a complete cluster. It's unlikely that the area can continue to be a tech leader without manufacturing expertise. Silicon Valley could have become the kind of entrepreneurial, manufacturing, engineering hub that Shenzhen became, but made the decision to maximize financial profits and political control over real production capability.

Involution and Abundance

"Involution" is the current buzzword used to criticize the state of Chinese industry. Usually, it implies that there is somehow too much competition. It's actual meaning is that capability is so high and competition is so strong that capital owners cannot get the returns they want. Involution is the natural result of competition, especially competition to implement new technological opportunities. When a new opportunity arises, investors have a gold rush mentality to rush in and worry about the details of profitability later.

In US politics, the term "abundance" is now popular, following the March 2025 book by Ezra Klein and Derek Thompson of that name.[8] They argue that the US needs to build new infrastructure and new housing and improve the business ecosystem in order to make life more affordable for average people. Ironically, that is exactly the program followed by China that has created the abundant goods needed to make life cheaper.

In microeconomics, there is a concept known as the hog cycle. If the supply of pork is short or demand high, prices rise. This leads farmers to invest in additional pork raising capability. Since the farmers cannot coordinate with each other, they all rush in without the ability to predict the market conditions in a year or two when this year's piglets are ready for market. When all that supply reaches market, the price falls making average eaters better off even though each farmer is worse off than he had planned for. This looks like "oversupply" or "involution" to farmers, investors, or government agricultural planners, but to eaters it looks like food abundance.

The involution process is longer for capital-intensive or research-intensive industries. As we have seen repeatedly since the original industrial revolution, every new

[8] Ezra Klein and Derek Thompson, *Abundance*, Avid Reader Press, 2025.

application of technology lures in investors, many of whom lose money. Each investor makes decisions without knowledge of other investments to the same end. Markets provide incentives and carry information, but they naturally create incentives that lead to high enough levels of investment that the return to capital is low. Investors call this oversupply, but it is just the competitive market process of investment in new technologies. Involution is the natural result of a competitive market economy. It is a hog cycle, except that a hog cycle is about perishable goods. Involution creates real long-term capacity.

Local governments in China often see their role as providing public goods to allow the companies in a cluster to move fast. Rui Ma, a specialist in Chinese industry, writes:

> This (government policy) shifts competition from policy signaling to execution quality: how quickly can they prepare land, connect utilities, issue permits, and support production ramp-up? How effectively can the local municipality recruit trained workers, house them, and retain them?[9]

This is exactly the policy recommended to US local governments by Klein and Thompson. However, many US cities and states do not have the expertise or the understanding of industry needed to support a sophisticated cluster. Some states do make an effort, but they usually just subsidize the location of a large assembly plant, not a complete cluster. Other states have such an onerous and slow bureaucracy that companies are fleeing them.

No one likes competition against themselves. Investors would prefer a monopoly or oligopoly that could maximize their returns by limiting other people's investment, but that would be at the expense of the general public.

New technological opportunities lead to natural booms that result in involution—that is, they create real new economic capabilities and benefit average people. To a large extent, the boom and bust in internet companies in the US from 1995 to 2000 was a beneficial round of investment that created a large amount of fiber optic capacity and many new companies. This contrasts with the monetary expansion driven boom in the US from 2010 to the present, which increased asset prices without creating real productive capability.

A major question about abundance/involution is, who is going to buy the products? It may be that new technologies and increasing productivity in China's factories will make manufactured "stuff" more easily available and cheaper than it is now. This is a good thing in that it makes a large majority of the population better off. Prices will fall. Profits may be low, but that is how an actually competitive free market economy works.

China's highly productive clusters have two places to sell their products. The primary purchaser will be Chinese consumers if real wages in China continue to rise. As areas outside major cities become more productive and richer, they will be a vast consumer market.

[9] Rui Ma, "Inside China's real advantage: Manufacturing at Scale," https://substack.com/home/post/p-185346010?source=queue January 22, 2026.

The second growing market will be to countries outside the traditional consumers in the US and Europe. There are limits because these countries are still poor, but China's exports to "other" has soared since 2020, largely by replacing US or European exports to those countries. For example, the value of Chinese auto exports to emerging markets has soared from about 3 billion dollars in 2020 to about 14 billion dollars in 2025.[10]

US Involution 1870–1890

The period after the end of the US Civil War, roughly from 1870 to 1890, was the key period of American industrial growth and also of fast improvement in the living standards of average Americans. During this time, the US built an extensive railroad system, an oil industry, and many factories. But it was also a period of declining prices and low capital profits—involution. Sadly, this high real wage growth period ended in the 1890s when very large firms were able to consolidate key industries into monopolies—raising returns to capital sharply and making average workers worse off.

Economists are very wary of deflation because they associate it with the Great Depression of the 1930s, when prices were falling and there was a lot of unused labor and production capabilities. The principal conclusion of *A Monetary History of the United States, 1867–1960*, by Milton Friedman and Anna Schwartz was that the reduction in the money supply in 1930 turned a stock market drop into the great depression.[11] But this conclusion is not generalizable. The crucial distinction is between supply-side driven involution and demand-side driven deflation. Supply-side created deflations, involutions, are very different from demand-side fluctuations driven by monetary or fiscal policy.

Researchers at the Bank for International Settlements looked at high and low growth periods since the 1870s and concluded that that deflations are not correlated with GDP declines, except for the Great Depression.[12] They distinguish between declines in asset prices and declines in the prices of goods and services. Housing or stock price declines do lead to recessions but a decline in the prices of everyday goods and services "appears to usher in *stronger* output growth." (Emphasis in the original.)

---

[10] Robin J. Brooks, "China's Invasion of EM Car Markets," Robin Brooks Substack, Dec 9, 2025. https://substack.com/home/post/p-181074956.

[11] Milton Friedman and Anna Jacobson Schwartz, *A Monetary History of the United States, 1867–1960*, Princeton University Press, 1971.

[12] Claudio Borio, Magdalena Erdem, Andrew Filardo, Boris Hofman, "The costs of deflations: a historical perspective," *BIS Quarterly Review*, March 2015. https://www.bis.org/publ/qtrpdf/r_qt1503e.htm. See also, Warick Powell, "China's Post-GDP Prosperity: Rising Use Value in an Age of Slowing Growth," Dr. Warick Powell's Substack, January 22, 2026. https://substack.com/home/post/p-179775323.

Widespread asset price declines are always the result of a previous boom. We have to pay with a recession, or worse, for the illusory monetary policy driven prosperity of boom years. The Japanese asset price growth in the late 1980s, the US stock market surge in the 1920s and the current boom, going back to 2010, in stock prices and housing prices in the US are all demand-side booms.

The US financial system that was created in the 1990s rewards investment in assets or potentially monopolistic companies rather than in factories or other productive assets. Eichengreen and Mitchener argue that the similar basically unregulated financial system of the 1920s created an asset bubble, which naturally burst:

> We conclude that the credit boom view provides a useful perspective on both the boom of the 1920s and the subsequent slump. In particular, it directs attention to the role played by the structure of the financial sector and the interaction of finance and innovation. The credit boom and its ultimate impact were especially pronounced where the organisation and history of the financial sector led intermediaries to compete aggressively in providing credit.[13]

Unproductive financial investments that just increase the value of assets squeeze out investment in new productive capability. There is no real productive investment that can achieve the very high returns that we have seen since the quantitative easing spree of the early 2010s in stocks or houses in the US or in the housing market in China. At least for the first half of the decade, China needed more housing, so China's boom was partly productive. It's hard to think of any real increase in productivity that has come from the post-QE stock or housing booms in the US, which are now coming to their inevitable end.

Policymakers will be tempted to try to reinflate the bubbles after the collapse. Japan tried massive monetary and fiscal stimulus, which never worked but did delay the needed structural adjustments. I think a better long-run policy would be to allow the asset prices to fall and get it over with as quickly as possible.

In contrast with asset price declines, creating more goods and services and therefore lowering prices—involution—does not cause growth to slow. This is the result of the beneficial and sustainable productivity increases. There are low capital returns and excess capacity in some production sectors, but this is the market-determined outcome. Eventually, the worst firms will fail and returns to capital will rise to a sustainable level.

In any investment process, many investors will make bad investments and lose their capital. Surviving investors do need a reasonable return on their capital, but they do not need monopolistic returns. It is not necessary to end involutions with very monopolistic gilded ages.

Michael Pettis, a professor at Guanghua Business School of Peking University, argues that Chinese investment spending became less productive after about 2008 because the growth rate of GDP became less than the growth rate of debt after that time. Obviously, he has a point in that as investment gradually created more capital the marginal return to additional capital will decline. As with any investments,

---

[13] Barry Eichengreen and Kris Mitchener, "The Great Depression as a credit boom gone wrong," *BIS Working Papers*, No. 137. September 2003. https://www.bis.org/publ/work137.pdf.

whether private or governments, it is impossible to predict the future, so mistakes will be made. There will be business investments that turn out not to pay off and infrastructure investments that turn out to be underutilized. But that does not mean that the investment as a whole was not transformative. In China, the investments over the past 25 years or so have fundamentally transformed productivity and sophistication of industry and also raised the quality-of-life of average people.

China is currently in the middle of both an asset price decline and a goods and services prices decline. Its housing prices, which were driven up by monetary and financial policies, are now a slowly deflating bubble. On the other hand, its manufactured goods are declining in price because of productivity and highly competitive markets.

My recommendation is that the government should not intervene in either of these processes. In the long run, lower housing prices will be beneficial to society as a whole though they will reduce the paper wealth of many households. This will reduce overall demand, at least in the short term, but reflating the bubble would lead to a worse crisis in the future. Increasing abundant goods and services will continue the government's overarching policy of making life cheaper.

Large Language Models vs AI Embedded in Factories

When Robert McNamara was chosen as Secretary of Defense by President Kennedy, it was hardly less surprising than when he was chosen as President of Ford. He had no deep expertise either in military affairs or automobiles, but he did know accounting. McNamara epitomizes the contrast between "car guys" and "finance guys," or, more generally, engineers vs financiers. I'll leave the reader to judge the wisdom of his policies during the war in Vietnam.

More recently, we have seen the effects of the transformation of Boeing from an engineering company to a company dominated by financiers and, even worse, by defense industry executives whose primary expertise is schmoozing with politicians and generals. In American industry, the financiers won.

The consequences of this change from production expertise to what is euphemistically called "financial engineering," can be seen throughout American industry. Contrast the success of Zhang Ruimin, whose focus on quality turned Haier into a world-leading appliance company, with the destruction of once mighty GE by the financial shenanigans of Jack Welch.

It looks like a similar dynamic is now playing out in AI. The US AI market will result in one or two dominant AI firms with proprietary models. The huge investment in data centers will put pressure on them to find ways to monetize the results as soon as possible. They will be seeking monopolistic profits that will allow them to take most of the economic value of the technology. China is also developing LLMs, most prominently Deepseek, but they are largely open source—encouraging innovation and competition. The major emphasis in China is embedding the technology into factories to increase productivity.

I am not going to guess how the AI fundamental technology race between the US and China will work out. I don't think anyone knows what the technology will look like in 2030. However, Nvidia founder and CEO Jensen Huang's opinion on where the technology will be applied is worth attention. In November 2025, he wrote on X that, "As I have long said, China is nanoseconds behind America in AI. It's vital that America wins by racing ahead and winning developers worldwide."[14] In a separate speech that month, he said, "China is going to win the AI race,"[15]

In January 2026, he recognized the importance of the speed of decision making and project implementation in China:

> (The US) "is generations ahead on chips. I think everybody recognizes that. … (But), If you want to build a data center here in the United States, from breaking ground to standing up an AI supercomputer, it's probably about 3 years. (China) can build a hospital in a weekend. That's a real challenge. They're builders. Their velocity of building things is extraordinarily high."[16]

Huang is unclear whether China is "generations" or "nanoseconds" behind. Note that he "clarified" his November remarks after his stock price fell.

In China, compute capacity is seen as a regulated utility. There will be huge competition and experimentation in the applications of AI. Competition will encourage application innovation, allowing the economic value to be split between the application development companies and the users.

Whether the current huge US investments in AI data centers will increase productivity remains to be seen. The current boom may be driven partly by real technological opportunities, but it is also driven by the oligopolistic power of a few Silicon Valley companies, government pressure, and loose monetary policy. As an American, my fear is that the boom may be driven by monetary policy more than the real economy, meaning that there will be a huge collapse as the bubble deflates. Also, big data center LLMs might be technologically leapfrogged, but the government will then prohibit using the newer technology to try to protect the investment in the older tech. International users will be wary of using US AI since the data centers will be in the US and will be subject to the long arm of US law.

LLMs, so far, are basically just a new version of social media and are a better search engine. They can do things like create boilerplate text and powerpoint slides—things that low-level white-collar workers do. Current large language

---

[14] Julia Shapero, "Nvidia CEO clarifies remarks about China winning 'AI race'" *The Hill*, November 6, 2025. https://thehill.com/policy/technology/5592818-nvidia-jensen-huang-china-ai-race/

[15] "Nvidia's Huang warns China will 'win the AI race': Report," *CNA*, November 6, 2025. https://www.channelnewsasia.com/east-asia/nvidia-jensen-huang-warns-china-will-win-ai-race-5448891#:~:text=BEIJING%3A%20Nvidia%20CEO%20Jensen%20Huang%20warned%20that%20China,intelligence%2C%20urging%20Washington%20to%20speed%20up%20its%20efforts.

[16] Caleb Naysmith, "'They can build a hospital in a weekend': Nvidia's Jensen Huang warns China builds way faster even if the US is 'generations ahead' on AI." MSN, January 15, 2026. https://www.msn.com/en-us/news/technology/they-can-build-a-hospital-in-a-weekend-nvidia-s-jensen-huang-warns-china-builds-way-faster-even-if-the-us-is-generations-ahead-on-ai/ar-AA1UddjZ?ocid=BingNewsSerp.

models are good at turning out inconsequential prose such as bureaucratic reports or college exams, but I have yet to see them increase productivity. Now, they are generating only a fraction of the revenue needed to pay for the capital expenses. Since they will be under extreme pressure to find revenue sources, the tech oligopolies will certainly find a way to enshittify[17] the products as they have traditional search engines. (I do hope this entire prediction is wrong.)

Infant Industry Industrial Policy

As an industrial policy, China's decision to ban Google, Facebook, and other US oligopolies from China was genius. By keeping out large, oligopolistic companies that were established a decade earlier, China allowed its own tech sector to develop. This did not happen anywhere else in the world, so now there are two tech ecosystems—the US dominated system and the Chinese system. The US stack is not really located in the US. A small portion is in California and Texas, but the actual producers are in South Korea, Taiwan, the Netherlands, and elsewhere. Only the consumer-facing companies are located primarily in the US.

Both the Biden and Trump administrations have tried to use US sanctions, including extended sanctions that apply to non-US suppliers, to prevent China from getting access to leading-edge technology. It is unlikely that this strategy will work except in the very short run. Essentially, the US is forcing China to again apply an infant industry development model to advanced chips, AI, and other technologies. It has exactly the same effect as if China's industrial policy had prohibited the import of these chips and other products.

As Nvidia's Jensen Huang has argued, the best way to stop China from developing an indigenous advanced chip industry would have been to flood the market with cheaper chips, stopping China's firms from competing profitably. However, it is unlikely that this would have worked. First, China has a large domestic market for such chips and China's producers certainly have a better understanding of the exact needs of this market. Chinese chip producers work closely with Chinese manufacturers to develop the exact products they need. Second, China has a very large supply of high-quality engineers who can work to solve technological problems, probably faster than can be done in the US. Third, China's clusters are highly competitive, adaptable, and can create innovative real-world products very quickly.

[17] See Cory Doctorow, *Enshittification: Why Everything Suddenly Got Worse and What to Do About It*, MCD, 2025.

What Leads to Innovation?

The World Bank's 2024 World Development Report[18] concludes that countries must go through a three-step process if they are to avoid being stuck in the middle-income trap. First, they must accelerate capital accumulation. Second, they must diffuse foreign technologies and business practices throughout the economy. In the final stage, the country must become an innovator of indigenous technology. The cluster system has been astonishingly successful at the diffusion stage. The remaining question is whether China will be a leader in innovation.

Since Robert Solow published the famous Solow Model of Development in 1956, most economic models have focused on the development of new technologies as the key factor in economic development. This problem ignores the important role of unternehmers and clusters, both of which China has in abundance.

I had an uncle, Michael, sadly passed away long ago, whose work illustrates the kind of non-technical businessman who is essential to economic development. His family was far from well-off, so he had no opportunity to attend university. After graduating from high school, he enlisted in the Air Force as a mechanic. After leaving the Air Force, he worked for some years as a mechanic on the Moon launch rockets. When that program shut down, he had no job and no college degree.

When I was teenager, he took me to his garage to show me a machine he had bought that pressed plastic into roadside advertising signs and said he was going to start a business selling signs. I was skeptical because I didn't see that he had any advantage in that business. Anyone could buy the machine for pressing plastic. He went through some very hard times, almost going bankrupt and living in near poverty. But, by working very hard and providing excellent customer service, he built up his business reputation, eventually earning contracts from McDonald's and Dunkin Donuts. I don't know how much money he earned, but he owned a jet. He created good jobs for more than 50 people.

The problem with economic models that just prioritize new technology is that they ignore the Michael's of the world. China's clusters are full of Michaels. They have proven to be much more central to economic development than are journal articles. China now has a huge cohort of good engineers and is leading the world in published articles on AI, but the real-world application of new technologies depends on competitive firms within the clusters.

It is ironic that *Why Nations Fail* discusses Bill Gates as an exemplar of American innovativeness. There was little if any innovation in Microsoft's products, but they have been very good at creating and exploiting their monopolistic position. IBM was stupid enough to give Microsoft the rights to the operating system of the original IBM PC. Microsoft used this initial dominance to extend their monopolistic power into Windows and Office. Xerox labs was a real innovator who developed the graphical user interface controlled by a mouse, but they did not benefit from this

[18] World Bank, *World Development Report 2024: The Middle Income Trap*, https://www.worldbank.org/en/publication/wdr2024.

innovation. The "genius" of Bill Gates and Steve Jobs was to take this innovation and use it to create monopoly power.

Much of what is often called disruption or creative destruction is just platforms extracting most of the economic value for themselves. What productivity has been created by the Google/Facebook grip on advertising that has wiped out newspapers? How do we tell creative destruction from destructive destruction? One way is to look at where the benefits go. If all the benefits go to a monopoly or a small oligopoly then it is probably destructive destruction.

The advantage of the Chinese clusters is that the tech benefits the new technologists, industrial companies and ordinary workers. The competition in clusters prevents the extraction of monopoly profits. Plus, they encourage the development of competitive small companies.

Clusters also force fast real-world application of new technologies or business models. John Boyd, who was a fighter pilot in the Korean War, developed the concept of an OODA loop. He observed that aerial dogfights are not won by the largest, most powerful, or most expensive plane, They are won by the plane and pilot who can go quickly through a four-part process to Observe the situation, Orient to the problem, Decide what to do, and Act quickly. Today, the Chinese industrial clusters have a very fast OODA loop. This is a large part of their success. It is important that this speed of China be maintained if China industry is to continue to progress.

Technological innovation and legal institutions are certainly important, but this book argues that China's development process also shows the importance of other factors:

1. China's highly competitive industrial clusters are the best in the world at pushing innovation in real products, but they do not fit under the traditional concept of legal institutions.
2. SOEs often provide essential inputs to development, but they are not extractive in the same way private monopolies are.
3. Industries need to maintain a high degree of competition. It is the role of the government to be sure that monopolies do not take most of the economic value out of the economy.
4. Real wage growth is essential to continued real growth.
5. Creation of abundant goods and services enables people to be better off; asset price increases do not. This is part of China's strategy of making a high quality-of-life cheaper.
6. The creation of non-high tech small businesses is critical to growth. Most development of the economy, even in the most developed economies, is not pushing a technological frontier. Rather, it is *unternehmers* taking advantage of opportunities to improve the lives of their families and their workers.
7. As Max Weber, Adam Smith and Edmund Phelps have all stressed, economic development is based on a culture of dynamism.

Chapter 8
The Future: Real Transition or Destructive Bubble

China is now at a pivot point away from a development model driven by (1) investment in real estate and infrastructure and (2) manufacturing exports. This model has been amazingly successful, but it has reached its apogee. A new model can be based on (1) applying new technologies throughout the economy, especially in manufacturing but also in agriculture and (2) further encouraging the entrepreneurial and other productive capabilities of people outside the biggest cities and the Eastern manufacturing zones. The key question for the future is whether China will be able to accomplish this real, fundamental structural reform while avoiding being overwhelmed by the short-term shock of shifting from the old model.

The biggest danger to the Chinese economy in the 2020s is the culmination of the housing and infrastructure construction boom. For most families, years of savings are tied up in housing. And lots of small businesses are dedicated to construction or remodeling or home furnishing. When I walk around Yuxi, it is obvious that many businesses are dependent on construction one way or the other—tools, furniture, design, windows and doors, and so on. As this sector has slowed down, it has been a big shock.

The temptation will be to use fiscal or monetary stimulus to try to keep the housing market—both prices and new construction—going. That would be a big mistake. A lot of the construction of the past 25 years has been highly beneficial. The country needed infrastructure and people needed housing. But the current infrastructure and housing stock in China is already world leading. The marginal benefit of building more will be low.

As was pointed out in Chap. 2, some booms lead to substantial amounts of real investment and some lead primarily to asset price increases. The housing and infrastructure boom of the last decade has created some overinvestment and some bubble-like characteristics, but only a fraction was wasted. In any economic system, an investment boom, no matter how useful overall, will lead to some waste.

A further stimulus is likely to lead more to asset price increases than to any useful investment. Look at the recent booms/bubbles in the US. The initial dot-com

D. Blair, *How Nations Succeed*, China and Globalization,
https://doi.org/10.1007/978-981-92-2059-5_8

boom from 1995 to 2000 in the US included a lot of malinvestment—that is the nature of all investment, especially into new technologies or new business models. Yet it did also create a lot of worthwhile new capabilities in fiber optics and in internet businesses. The second boom, which led up to the housing/financial crisis of 2008 was mostly asset appreciation, but it did include a substantial amount of new housing construction. The 2010-present boom/bubble caused by the huge monetary stimulus of quantitative easing and then the US government spending spree from 2020 to 2024 has gone almost entirely into asset appreciation—raising the prices of pre-existing housing and stocks—without creating any real productive capabilities or useful long-term durable consumption assets.

Don't Start an Unproductive Bubble

To cure a disease, it is key to diagnose the problem correctly. Taking the wrong medicine can make the illness far worse. It is critical to realize that China is in the midst of moving to a new long-term development model, not just enduring a short-term problem before returning to the old development model. Policies should seek ways to facilitate that transition rather than just palliate the current pain in an attempt to go back to the old model.

As the late, great UCLA economist Axel Leijonhufvud argued, Keynesian demand management is designed to solve coordination problems.[1] That is, Keynes focused on restoring an economy to a development model that is sustainable in the long-run but which has had a sort of nervous breakdown that rendered even perfectly viable enterprises illiquid, usually because of failures in the financial system. That is, otherwise sound companies might go out of business just because they cannot get short-term financing. Banks or other financial institutions are afraid to carry out transactions because they worry that their counterparties might become insolvent. This very fear leads to all banks simultaneously cutting credit and even refusing to clear transactions. This leads to business failures and workers losing jobs—a vicious cycle. Keynes argued that the government needs to step in with large spending to ensure that viable businesses don't fail because of systemic fears.

This is not the problem facing China today. The old development model of large investments in infrastructure and housing combined with growing exports to the US and Europe was incredibly successful but it is not viable going forward. China can try to use fiscal spending to ease the transition by helping unemployed workers or by redirecting other resources to new industries, but it would be a bad mistake to use fiscal or monetary stimulus to try to restore the old model. The current situation is a systemic shift in the real economy, not a Keynesian coordination problem.

In late 2008 and early 2009, the US economy clearly had very serious Keynesian coordination problems. Banks were refusing to buy commercial credit, very

[1] Axel Leijonhufvud, *On Keynesian Economics and the Economics of Keynes: A Study in Monetary Theory*, Oxford University Press, 1968.

short-term debt, from large corporations that were clearly solvent in the long-term. This caused short-term liquidity problems that would have destroyed many viable financial institutions and other companies. Very large fiscal and monetary stimulus was certainly appropriate as a solution to this short-term problem. Without it, the world might have gone into a new great depression.

Instead of seeing the 2008–2009 stimulus as a short-term stop gap that allowed time to restructure away from a failed business model. The Obama administration and the Federal Reserve decided to double down on the old model. In my view, they should have taken the opportunity to reverse the banking “reforms” of the 1990s, to restore competition in the banking industry, to restore financial stability, and to refocus banks on their old jobs of loaning to the real economy of industry and small businesses. They also should have sought to restore competition throughout the economy.

They did the opposite. The banking system was allowed to consolidate even further. Essentially creating ten or so large mega-banks, mostly in New York, and some very large non-bank financial institutions. Silicon Valley, which had previously been highly competitive, was allowed—maybe directed—to concentrate into a few, very large, oligopolistic firms. Monopolization of many sectors was allowed to metastasize.

In November 2010, the Federal Reserve started the second stage of its quantitative easing strategy. That is, it very rapidly increased the amount of credit in the economy, driving interest rates to near zero. The initial coordination problems caused by the financial crisis had been solved by the earlier stimulus, so this was a very different kind of program.

The purpose of this second stimulus was to create a boom in asset prices—house prices and stock values. As we saw in Chap. 2, this is exactly what happened (see graphs 2–4 and 2–5). The asset price boom transferred wealth from average people to already wealthy people—greatly exacerbating income inequality. Housing prices, along with the prices of other necessities, soared. The Biden spending and loose monetary policy of 2021–2022 further prolonged this bubble. Housing went from being very affordable for average people in 2012 to being the least affordable ever in 2024. So, the US saw a decade of apparent growth, driven by housing and stock price rises, at the cost of creating an even larger bubble than in 2008 and making income inequality much worse.

These very expansive stimulus programs did raise consumption by transferring more wealth to rich people, thus creating a “wealth effect” where people are selling stocks (sometimes houses) to pay for consumption. In February 2025, the top 10 percent of American households, those making about $250,000 per year, did half of the total consumption. In 1995, before the first monetary stimulus that led to the dot-com bubble, the top 10 percent consumed only 36 percent of the total.[2] A

[2] Ben Carson, “The Top 10%,” A Wealth of Common Sense, February 25, 2025. https://awealthofcommonsense.com/2025/02/the-top-10/.

country that focuses on providing goods and services mostly to the wealthiest people is not a healthy society.

As of 2025, we have not yet seen the bubble burst and I hope my prediction is wrong. But I think the US would have been much better off accepting slower short-term growth in 2012 and 2013 and focused on moving to a sustainable long-term economic model with a more equitable earnings distribution. Of course, Obama might have lost the 2012 election without the apparent growth that came from the stimulus; making the right long-term policy decisions is difficult for American politicians.

Consumption primarily by wealthy people creates two economic problems apart from the obvious issue of income inequality. First, the wealthiest households will spend a lot on luxury goods, often foreign produced, which may not require much labor input. Second, if the asset price bubble burst, total consumption may fall sharply and more than proportionately to GDP, thus compounding the risk of a systemic collapse.

The conclusion I draw from this history is that China should not try to achieve short-term economic growth by demand-stimulating policies that would create a bubble and slow the needed long-term transition. A stimulus in China now might be able to raise housing prices and temporarily employ workers in construction-related industries, but it is likely to be the same sort of bubble without real capability creation that the US is undergoing.

As we have seen in the US, these kinds of bubbles lead to social problems. Because the stimulus raised housing prices and the prices of services such as health and education, many people, especially young people who don't have assets, find life unaffordable. This leads to social problems, lying flat and psychological despair. Young people are afraid to start businesses because they can barely afford their rent. Peter Theil, a leading tech venture investor, says that most of his investment flows directly into the pockets of landlords.

Two Growth Drivers for the Coming Decade

Several current slogans pithily summarize the government's plans to deal with the current dilemma—dual circulation, common prosperity, technological upgrading, rural revitalization. These are consistent with two growth drivers, areas that can grow faster than overall GDP, going forward: (1) tech upgrading of factories (large and small) and (2) raising incomes and productivity in the hinterlands.

Transferring resources, workers and equipment, to new industries will not be easy since so much of the economy has been focused on construction. As we have seen in rust belts around the world, it is not easy moving experienced workers or specialized equipment in one industry to a new industry. But it has to be done.

China has already directed much of its new investment into manufacturing, especially into incorporating AI, the "internet of things," and robotics into production processes. This has the potential to increase productivity dramatically and also will allow China to move into higher quality products—maybe tailored for particular clients. Doing so could well consolidate China's position as factory for the world for the foreseeable future. Manufactured "stuff" could become very cheap and abundant, improving the lives of many people. This is consistent with the long-term strategy of making life more affordable. Some of the increased productivity can be used to improve the work/life balance in China.

However, highly productive faculties need fewer workers. What are these workers to do? Rising real wages has been a critical part of Chinese development model and needs to continue. For labor income to rise, a way must be found to prevent most of the increased value from flowing to a few monopolistic capital owners. That is, competition among companies must be enforced.

As the Chinese working age population falls, the problem of too many workers might take care of itself. Still, education tailored for the demands of the new technologies will be important. Increasing the emphasis on tailored vocational education, maybe company-school partnerships, could create lots of good opportunities. As Henry Ford proved, skilled, well-paid workers create their own demand.

Still, increasing manufacturing production and workers in Eastern factories and clusters cannot provide well for China's entire workforce and cannot create enough demand. Also, manufacturing efficiency does not automatically result in more abundant essential services such as education and healthcare—though there is a lot of work applying new technologies to these fields also.

The second pillar of China's future growth will be continuing to raise living standards, productivity and wages in areas away from the biggest cities. Only 40 percent of China's population lives in first or second tier cities—leaving 60 percent in smaller cities and the countryside.[3] There is a lot of room to grow there.

As Chap. 5 showed, many people in rural areas and smaller cities already have a good life. They have abundant, cheap food and nice houses. They also have a long tradition of building rural small businesses going back for centuries and revived during the "traditional village enterprises" period of the 1980s. The investment in transportation and telecoms has given them access to the national and world markets. If their businesses can continue to grow, the rural/smaller city entrepreneurs will form a large source of both consumer and investment-good demand for the products of the new, high-tech factories.

Exports

Exporting to the US and Europe, which was a growth driver in the now culminating Chinese model, is also unlikely to grow rapidly going forward. In 2025, Chinese exports reached a record level, but the future growth rate of exports is very unlikely

[3] David Fishman, "Off the beaten track: How is life in China's most median city," Substack *Crossing the River by Feeling for Stones*, November 9, 2025. https://www.feelingthestones.com/p/off-the-beaten-track-how-is-life.

to be higher than the growth rate of overall GDP. China is already the world's largest exporter by far and it is mathematically impossible for an already high percentage to grow at a high rate for very long. Both the EU and the US are politically opposed to increasing their imports from China. Chinese exports to these two markets won't collapse because there are few alternatives to many Chinese products, but they won't grow rapidly.

Exports to developing countries show a lot of promise. For example, Chinese car exports rose from near zero in 2006, to about half of the world total in 2016 and to around three-quarters today. This was accomplished mostly by displacing European and Japanese car producers in developing countries.[4] The US and EU may attempt to keep many Chinese products out of their markets, but for other countries this policy does not make much sense. Why should a country that does not have a car industry and is probably too small to ever have a car industry, purchase expensive, unreliable, technologically-behind North American or European cars? It is likely that China will take that market almost entirely—just as Japan did in the 1970s and 1980s.

Nevertheless, China cannot count on any foreign countries to be the primary demand for its products. If China runs a trade surplus with the Global South, the purchases have to be financed. Either China has to import equal amounts from them or lend them the money needed to buy China's products. Maybe more importantly, running a trade surplus means that China is loaning money to the deficit country. Any surplus country is sending real goods to the importing country and just getting financial promissory notes in exchange. Given the current state of US and European finances, it is not clear that China wants to risk lending more money to them.

The US is the largest trade deficit country, so any country running large trade surpluses is somewhat dependent on the US consumer market. Despite recent growth in some developing countries and in BRICS countries, high-income countries (US, UK, EU, Japan and a few others) still constitute 61 percent of total world GDP (in US dollar terms).[5] China is higher than 18 percent. So that leaves only 21 percent of world GDP as a potential source of demand growth for Chinese exports.

The bottom line is that future Chinese growth will depend on domestic demand, which will depend on the incomes of Chinese people. The government's "dual circulation" strategy encourages exports while focusing on further building domestic demand.

The Middle-Income Trap and Tech Innovation

Recent editions of the World Bank's annual World Development Report classify development into three sequential stages— (i) investment-focused followed by (ii) a stage of applying world-standard technology and finally (iii) reaching an

---

[4] Robin J. Brooks, China's assault on German auto makers, Substack, December 28, 2025. https://substack.com/home/post/p-182738493.

[5] World Bank, *World Development Report 2024: The Middle-Income Trap*, p. 4. https://www.worldbank.org/en/publication/wdr2024. These numbers are for 2022.

innovation-focused economy.[6] The WDR thesis is that to escape the middle-income trap, a nation must progress through each of these stages.

This book has shown that China has already accomplished these steps. High rates of investment have continued since the start of the reform and opening up stage. Crucially, the investment was accompanied by high levels of market competition. China is now at the leading edge of applying current world-standard technologies—both in factory production and in everyday life. I now find life in China to be much more convenient than in the US because of highly advanced and integrated payments systems, communications, and transportation. Nowhere in the world can match it.

As was discussed in Chap. 7, China and the US are the only two countries that have integrated technological innovation ecosystems. Many rich countries hardly do any technological or industrial innovation at all. Building on the Solow model, which concludes that technological innovation is the only way to add value other than just accumulating labor or capital, and Schumpeter's model, which calls for technological creative destruction, many modern development theories argue that technological innovation is the way to develop. Doubtless, scientific and technological change has underlain many of the lifestyle improvements of the nineteenth and twentieth centuries. Tech innovation is an important part of improving living standards, but it is far from sufficient.

But factors and policies other than investment accumulation, technology application, and technological innovation have also been critical to China moving past middle-income status. Highly competitive markets ensure that the benefits of investment don't go to a few monopolists, in contrast to many US sectors. It is simple and fast for Chinese entrepreneurs to register a business and do the bureaucratic paperwork, in stark contrast to most European countries. Public investment to make everyday life more affordable has raised Chinese standards of living to near equivalence to the US.

Development theories that focus mainly on tech innovation ignore the role that ordinary non-tech entrepreneurs, what I have called *unternehmers* in Chap. 5, play in improving living standards. Small companies might not look efficient in terms of output per worker, but they have allowed huge numbers of families to escape poverty and employ lots of people at acceptable wages. China's long tradition of such small businesses combined with massive investments that have allowed them to find markets has been a key part of the development path.

In my view, China has already escaped the middle-income trap. However, a severe recession or depression could occur if the current structural and economic model transition were to be mismanaged. This could push the country into long-term middle-income status. Purely tech innovation and deployment will not solve the problem, though it will be a contributor. To ensure sufficient demand for the factories made highly productive by the new technologies, the policy of "common

[6] World Bank, *World Development Report 2024: The Middle-Income Trap*, https://www.worldbank.org/en/publication/wdr2024.

prosperity," meaning both continuing to push real wage increase and spreading prosperity throughout the country will be essential. China also needs to continue to support the small businesses that create the vast majority of jobs and to further improve the speed and ease of bureaucratic processes.

Entitlements vs Real Wage Growth

Recently, many Chinese scholars and policymakers have called for a wider social safety net. They argue both that this is fair and also that it would increase consumer demand.

Since the late 2000s, China has followed policies that try to help the poor and working class without creating a culture of entitlement. Real competition combined with public quality-of-life investments have sharply raised wages and raised real living standards. In the 2000s, many areas of China had poor transportation and communications infrastructure, now such amenities/productivity-enhancers are ubiquitous throughout the country.

Rural and inland incomes have risen sharply, to the point that many people in rural areas or lower-tier cities now have a quality-of-life exceeding many in the cities. The ratio of per capita RMB disposable income in rural areas compared to urban areas rose from 32 percent in 2007 to 43 percent in 2024.[7] The ratio is even closer if we incorporate daily life cost differences and other lifestyle differences. Even looking at pure money receipts, the Gini coefficient fell 0.491 in 2008, at the height of the bling dynasty, to 0.465 today. Still, I think these numbers do not reflect the high quality-of-life in rural areas and smaller cities and the measures that have made life cheap for everyone.

In the US, we have seen entitlement programs create generations stuck in poverty, living off welfare and, increasingly, disability, payments. The 1990 Americans with Disabilities Act, which may have been created with the intention of making it easier for people in wheelchairs to travel and get jobs, was so vaguely written that large numbers of people with poorly specified disabilities demand payments and special treatment. Once people become dependent on such programs, they are difficult to reverse. Even worse, these programs affect the culture. More than 20 percent of students at Harvard and 40 percent at Stanford claim to be disabled.[8] They are not asking for wheelchair ramps to class, but for extra time on tests and other assignments because they have anxiety or some other difficult to prove (or refute) problem.

7 Zhu Yutao and Yuxuan Jia, "Cai Fang on Beijing's income equality playbook," *The East is Read*, December 11, 2025.

8 Rachel Bowman, "One in THREE students at top colleges now claiming to be disabled to get extra time to complete exams, including one who was allowed to bring meddling mother into class," *Daily Mail*, December 3, 2025.

Rapidly rising real wages are a sign of other things going well in the economy. Rising incomes through transfers are not the same thing. They are a palliative to try to cover up ills in the economy.

That is not to say that improvement is not needed in China. Workers could be given more employment law protection, but the government needs to be careful not to make these measures so restrictive that businesses, especially small businesses, are afraid to hire people. The hukou system obviously needs to be reformed, but China does not want to see urban slums develop. Income taxes on wealthy people may be too low and the VAT tax may be too high, but innovation and entrepreneurship needs to be rewarded.

China certainly has an aging population, but it is less of a problem than in Western countries because most old people live with their families, where they often supplement family incomes and provide childcare. Thus, they need less state support than we see in the West.

In my view, China should continue its very successful policies of enforcing market competition (which reduces returns to monopolistic capital and reduces prices) and focusing on public investment targeted to simultaneously enhance everyone's productivity and improve everyone's quality-of-life.

Be Careful How Consumption Is Increased

A chorus of economists recommend increasing consumption as a solution to China's slowing growth. But, as observed in Chap. 1, the quality-of-life of average Chinese is already high and the CF40 think tank concluded that China's consumption level, properly measured, is now at about 80 percent of that of the US. Furthermore, China's consumption has risen dramatically over the past 20 years, along with the rapid growth in median real wages.

Nicholas Lardy of the Peterson Institute for International Economics argues that Chinese consumption is "not as low as many people think." He concludes that Chinese consumption as a percent of GDP is already at a level equal to many OECD countries because "social transfers in kind," meaning consumption made possible by public investment, amount to 6 percent of GDP.[9] This is a similar point to the idea stressed in Chap. 1 that public investment since 2010 has aimed to improve average quality-of-life, not just push measured GDP.

There are four policies that could conceivably increase consumption further. Option 1 is to continue increasing real wages, as China has been doing throughout the reform and opening up period. Option 2 is to create an expansive system of welfare entitlements and income transfers to try to reduce anxiety and induce people to spend. Option 3 is to encourage consumer debt. And option 4 is to use Keynesian

[9] Nicholas R. Lardy, "Consumption in China is not as low as many think," Peterson Institute for International Economics, April 9, 2024. https://www.piie.com/research/piie-charts/2024/household-consumption-china-not-low-many-think.

demand management—fiscal spending or rapid money creation—to stimulate the economy. Of these, increasing real wages is the only sustainable way to increase consumption.

Option 4, demand stimulus, made sense for China in the early 2010s as a response to the financial coordination problems caused by the American financial crisis and when the heavy investment model still had room to grow. The restoration of the investment-led model worked at that time. But repeating this policy now would create an unsustainable asset-price bubble and also make income inequality worse.

Keep the Strong Advantages of China's System

Since the start of reform and opening up in the late 1970s, China has gone through a series of very different development models. In the 1980s, "crossing the river by feeling for stones" period, the focus was on increasing agricultural productivity by recognizing the need for individual incentives. This time also saw the beginnings of the restoration of the small business/farmer tradition.

In the 1990s, moves toward "world-standard" institutions and regulatory systems began. The state-owned commercial banking system focused on real productive capacity was created. And Foreign Domestic Investment was encouraged—first in special economic zones and then throughout the country.

In the 2000s, China focused on exports based on low wages and FDI increased further. Crucially, Chinese local entrepreneurs learned both technology and business models from the foreign investment and quickly developed domestic supply capabilities. Real wages soared along with GDP.

After 2010, there was an increased focus on improving the quality-of-life of average people. Massive investment created world-leading housing and infrastructure. There was focus on creating original domestic technology, companies, and products.

Throughout all these very different models that were designed to solve different problems, three underlying principles have been constant: **competition, rising real wages, and government-encouraged investment**.

I'm going to conclude with ten points of unsolicited advice derived from the analysis throughout the book:

1. Maintain highly competitive markets.
2. Be sure that median real wages rise at least as fast as GDP.
3. Rising consumption should be based on these rising wages, not on artificial stimulus, consumer debt, or entitlement programs.
4. Continue the emphasis on public investment designed to make the lives of average citizens, easier and cheaper.
5. Maintain a highly regulated financial system focused on developing the real economy of industry, farming and other production.

6. Don't try to resurrect the old model by using fiscal or monetary stimulus. Do not artificially inflate housing prices as the US did.
7. Keep up the famous speed of China. Unfortunately, I am frequently hearing the word "formalism," meaning bureaucratic processes without purpose, more and more lately.
8. Don't allow the creation of a culture of entitlement.
9. Many of China's State-Owned Enterprises have been beneficial, certainly better than private monopolies, but small businessmen are now reporting that some SOEs are acting in a predatory way against struggling private producers. The old emphasis on SOEs as a kind of regulated utility needs to be enforced.
10. Emphasize industrial clusters of small and medium-sized businesses, along with the giants needed for some kinds of tech upgrading.

Bibliography

Acemoglu D, Robinson JA (2013) Why nations fail: the origins of power, prosperity, and poverty. Crown Currency

Amsden A (1992) Asia's next giant: South Korea and late industrialization. Oxford University Press

Anderson M (1990) The limits of realism. University of California Press, Berkeley

Autor D, Dorn D, Katz LF, Patterson C, van Reenen J (2017a) Concentrating on the fall of the labor share. NBER Working Paper Series, Working Paper 23108. http://www.nber.org/papers/w23108

Autor D, Dorn D, Katz LF, Patterson C, van Reenen J (2017b) The fall of the labor share and the rise of superstar firms. NBER Working Paper Series 23396. www.nber.org/papers/w23396

Bateman J (2016) Increasing China's food supply—with drones. The Diplomat, November 11, 2016. https://thediplomat.com/2016/11/increasing-chinas-food-supply-with-drones/

Bernard T, Dercon S, Orkin K, Taffesse AS (2014) The future in mind: aspirations and forward-looking behaviour in rural Ethiopia. World Bank. https://www.worldbank.org/content/dam/Worldbank/Feature%20Story/Africa/afr-tanguy-bernard.pdf

Bertrand N (2014) Here's the average SAT score for every college major. Business Insider, October 25, 2014. https://www.businessinsider.com/heres-the-average-sat-score-for-every-college-major-2014-10

Blake S (2025) Are people in Mississippi really richer than people in Europe?. Newsweek, April 30, 2025. https://www.newsweek.com/are-people-mississippi-really-richer-people-europe-2066233

BNM Annual Report (2013) Potential impact of the minimum wage policy on the Malaysian economy. https://www.bnm.gov.my/documents/20124/830190/cp04_005_box.pdf

Bond S (2019) Factory Girl, ran as a series on her website stephaniebond.com. Parts 1–6, available on Kindle

Borio C, Erdem M, Filardo A, Hofman B (2015) The costs of deflations: a historical perspective. BIS Quarterly Review, March 2015. https://www.bis.org/publ/qtrpdf/r_qt1503e.htm

Bowman R (2025) One in three students at top colleges now claiming to be disabled to get extra time to complete exams, including one who was allowed to bring meddling mother into class. Daily Mail, December 3, 2025

Brooks RJ (2025a) China's invasion of EM car markets. Robin Brooks Substack, December 9, 2025. https://substack.com/home/post/p-181074956

Brooks RJ (2025b) China's assault on German auto makers. Substack, December 28, 2025. https://substack.com/home/post/p-182738493

Brown K (2018) China's dream: the culture of Chinese communism and the secret sources of its power. Polity

D. Blair, *How Nations Succeed*, China and Globalization,
https://doi.org/10.1007/978-981-92-2059-5

Buchanan JM, Tullock G (1962) The calculus of consent: logical foundations of constitutional democracy. University of Michigan Press

Buck PS (1959) The good earth trilogy. Open Road Integrated Media, New York

Carlswell D (2023) Is Mississippi really as poor as Britain? *The Atlantic*, August 18, 2023

Carson B (2025) The top 10%. A Wealth of Common Sense, February 25, 2025. https://awealthofcommonsense.com/2025/02/the-top-10/

Case A, Deaton A (2021) Deaths of despair and the future of Capitalism. Princeton University Press, Princeton

Chan K, Geddes TDG, Brown A (2025) Chinese industrial maximalism: Lu Feng. High Capacity, June 19, 2025. https://www.high-capacity.com/p/chinese-industrial-maximalism

Chandler AD (2009) Inventing the electronic century: the epic story of the consumer electronics and computer industries, Kindle edition. Harvard University Press

Chang LT (2009) Factory girls: voices from the heart of modern China, reprint edition. Random House

Coase R, Wang N (2012) How China became capitalist. Palgrave Macmillan

Conway P et al (2010) Product market regulation and competition in China, OECD Economics Department Working Papers No. 823. OECD Publishing, p 10. https://doi.org/10.1787/5km32vmgmfbx-en

Covarrubias M, Gutierrez G, Phillipon T (2019) From good to bad concentration?, Industries over the past 30 years. NBER Macroecon Annu 34(1):1–46. https://www.journals.uchicago.edu/doi/full/10.1086/707169

Davies S (2022) Data farming: how digitalization is changing China's villages. The World of Chinese, November 9, 2022

de Tocqueville A (n.d.) Democracy in America, kindle edition (trans: Reeve H)

Delong B, Summers LH (1991) Equipment investment and economic growth. Q J Econ 106(2):445–502

Doctorow C (2025) Enshittification: why everything suddenly got worse and what to do about it. MCD

Eichengreen B, Mitchener K (2003) The great depression as a credit boom gone wrong. BIS Working Papers, No. 137, September 2003. https://www.bis.org/publ/work137.pdf

Enright MJ, Scott EE, Chang K-M (2005) Regional powerhouse: the Greater Pearl River Delta and the rise of China. John Wiley & Sons (Asia), Singapore

Fei Xiaotong (Hsiao Tung Fei) (1946) Peasant life in China: a field study of country life in the Yangtze Valley, International library of sociology and social reconstruction, London. First published 1939

Fei Xiaotong (1992) From the soil: the foundations of Chinese society (Xiantu Zhongguo). (trans: Hamilton GG, Zheng W. University of California Press, Berkeley, p 60

Firpo SP, Portella AL (2024) The labor market in Brazil, 2001–2022. IZA World of Labor: 441. https://doi.org/10.15185/izawol.441.v2, https://wol.iza.org/articles/the-labor-market-in-brazil/long

Fishman D (2025) Off the beaten track: how is life in China's most median city. Substack crossing the river by feeling for stones, November 9, 2025. https://www.feelingthestones.com/p/off-the-beaten-track-how-is-life

Friedman M, Schwartz AJ (1971) A monetary history of the United States, 1867-1960. Princeton University Press

Gallup (2025) The Global Safety Report 2025: a safer world in unsafe times? https://www.visualcapitalist.com/wp-content/uploads/2025/10/Gallup_Global-Safety-Report-2025.pdf

Gramlich EM (1994) Infrastructure investment: a review essay. J Econ Lit XXXII:1176–1196

Greenwald DL, Lettau M, Ludvigson SC (2025) How the wealth was won: factor shares as market fundamentals. J Polit Econ 133(4) abstract

Grullon G, Larkin Y, Michaely R (2019) Are US industries becoming more concentrated? Rev Finance 23(4):697–743. https://academic.oup.com/rof/article-abstract/23/4/697/5477414?redirectedFrom=fulltext

Guo Y (2026) Beijing introduces new policies to enhance parks. China Daily, January 13, 2026. https://www.chinadaily.com.cn/a/202601/13/WS69662d7da310d6866eb33792.html
Hannink N (2018) Overuse of fertilizers and pesticides in China linked to farm size. Stanford Doerr School of Sustainability, June 18, 2018. https://sustainability.stanford.edu/news/overuse-fertilizers-and-pesticides-china-linked-farm-size
Harrison H (2005) The man awakened from dreams: one man's life in a North China village, 1857-1942. Stanford University Press, Stanford
Hiirschman AO (1958) The strategy of economic development. Yale University Press, New Haven
Hirschleifer J (1970) Investment, interest, and capital. Prentice-Hall, Inc., Englewood Cliffs, NJ
Hobart B, Huber T (2024) Boom: bubbles and the end of stagnation. Stripe Press, San Francisco
Hu B (2014) Financial repression and interest rate liberalization in China. Indiana University
Huddleston J (2013) The battle between China's 3 Telecom companies and its impact on profits. Seeking Alpha, July 23, 2013. http://seekingalpha.com/article/1565812-the-battle-between-chinas-3-telecom-companies-and-its-impact-on-profits
Huiying Z, Junhong H (2020) Neighbors discover group success online. China Daily, October 26, 2020. https://global.chinadaily.com.cn/a/202010/06/WS5f7bc7aca31024ad0ba7d481.html
Hulten CR (2004) Transportation infrastructure, productivity, and externalities. Paper prepared for the 132nd Round Table of the European Conference of Ministers of Transport, at the Joint OECD/EMCT Transport Research Center, Paris, France, December 2 and 3, 2004
Intarakumnerd P (2019) Thailand's middle-income trap: firms' technological upgrading and innovation and government policies. Seoul J Econo 32(1):107–135. sje.ac.kr/xml/26566/26566.pdf
Joncas G (2011) Mistranslating Marx? The "idiocy of rural life". Linguistic Capital, September 27, 2011. http://linguisticcapital.wordpress.com/2011/09/27/mistranslating-marx-the-idiocy-of-rural-life/
Jones, Lang, Lasalle (2020) "Go West" and China's Inland Gateway Cities, June 26, 2020. https://www.joneslanglasalle.com.cn/en/trends-and-insights/research/go-west-and-china-inland-gateway-cities
Kennedy J (2021) Monopoly myths: are superstar firms stifling competition or just beating it? ITIF, January 11, 2021. https://itif.org/publications/2021/01/11/monopoly-myths-are-superstar-firms-stifling-competition-or-just-beating-it/
Klein MC, Pettis M (2020) Trade wars are class wars: how rising inequality distorts the global economy and threatens international peace. Yale University Press, New Haven
Klein E, Thompson D (2025) Abundance. Avid Reader Press
Klenow PJ, Rodriguez-Clare A (2005) Chapter 11: externalities and growth. In: Aghion P, Durlauf SN (eds) Handbook of economic growth, vol 1A. Elsevier
Kornai J, Maskin E, Roland G (n.d.) Understanding the soft budget constraint. Institute for Advanced Studies, Economics Paper 19. https://www.sss.ias.edu/files/papers/econpaper19.pdf
Krugman P (1994) The Myth of Asia's miracle. Foreign Affairs, November/December, 1994
Kuhn D (2011) The age of Confucian rule: the song transformation of China. The Belknap Press of Harvard University, Cambridge, MA. "Chapter 3: Reforming into Collapse"
Lardy NR (2024) Consumption in China is not as low as many think. Peterson Institute for International Economics. https://www.piie.com/research/piie-charts/2024/household-consumption-china-not-low-many-think
Lauck JK (2022) The good country: a history of the American Midwest, 1800-1900. University of Oklahoma Press, Norman
Leijonhufvud A (1968) On Keynesian economics and the economics of Keynes: a study in monetary theory. Oxford University Press
Leonard C (2022) The lords of easy money: how the federal reserve broke the American economy. Simon & Schuster, New York
Li X (2000) Major drivers of poverty reduction in China. Lecture as part of the "In Pursuit of Development". website, 2000. https://www.youtube.com/watch?v=Uyzt2teH9C8
Lin JY (2011) Demystifying the Chinese economy. Cambridge University Press

Ma R (2026) Inside China's real advantage: manufacturing at scale. January 22, 2026. https://substack.com/home/post/p-185346010?source=queue
Marighella R (2023) China view: China's western development strategy. Modern Treatise, November 23, 2023. https://www.moderntreatise.com/international/2020/11/17/china-view-chinas-western-development-strategy
Marx K, Engels F (n.d.) Manifesto of the Communist Party, Chapter 1, https://www.marxists.org/archive/marx/works/1848/communist-manifesto/ch01.htm
Massod O, Sergi BS (2011) China's banking system, market structure and competitive conditions. Front Econ China 6(1):22–35. https://link.springer.com/article/10.1007/s11459-011-0120-x
Nash J (2025) US household incomes over 50+ years: the great divide. Vetta Fi Advisor Perspectives, September 17, 2025. https://www.advisorperspectives.com/dshort/updates/2025/09/17/u-s-household-incomes-over-50-years-the-great-divide
Nathanson W (n.d.) Culture versus civilization: Oswald Spengler's and Bertrand Russel's Social Prognosis. https://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?article=3702&context=ocj
Naville X (2021) The lettuce diaries: how a Frenchman found gold growing vegetables in China. Farnshaw Books, Hong Kong
Naysmith C (2026) 'They can build a hospital in a weekend': Nvidia's Jensen Huang warns China builds way faster even if the US is 'generations ahead' on AI. MSN, January 15, 2026. https://www.msn.com/en-us/news/technology/they-can-build-a-hospital-in-a-weekend-nvidia-s-jensen-huang-warns-china-builds-way-faster-even-if-the-us-is-generations-ahead-on-ai/ar-AA1UddjZ?ocid=BingNewsSerp
Nerdrum O (n.d.) Immanuel Kant changed our heads. https://www.youtube.com/watch?v=EcjVXBXn7b4&t=29s
New Straits Times (2025) Malaysia's real wages down three-fold in last 40 years, says former BNM Governor. May 4, 2025. https://www.nst.com.my/news/nation/2025/05/1211265/malaysias-real-wages-down-threefold-40-years-says-former-bnm-governor
North DC, Thomas RP (1973) The rise of the western world: a new economic history. Cambridge University Press
Nunlist T (2017) Piece by piece: SOE reform is among China's biggest challenges. CKGSB Knowledge, November 1, 2017
OECD Perspectives on economic development: boosting productivity to meet the middle income challenge, 2014
OECD Economic Surveys China (2015) Overview, March. http://www.oecd.org/eco/surveys/China-2015-overview.pdf
Ortiz-Ospinisa E, Roser M, Arriagada P (2024) Trust: how does interpersonal trust differ across societies and what role does it play in economic development? Our World in Data, April 2024. https://ourworldindata.org/trust
Othman SA (2025) Malaysia's wage crisis: real incomes shrink as structural inequality deepens. DagangNews.com. May 6, 2025. https://www.dagangnews.com/article/english-terkini/malaysias-wage-crisis-real-incomes-shrink-structural-inequality-deepens-51536
Parrish B (n.d.) Average salary in China: Local data 2023 + 2024. TeamedUP China. https://teamedupchina.com/average-salary-in-china/
Perez-Arce F, Prados MJ (n.d.) The decline in US labor force participation rate: a literature review. https://dornsife.usc.edu/mprados/wp-content/uploads/sites/203/2023/12/Perez_Prados_MS_Decline_in_US_labor_force_participation_a_Review.pdf
Pew Research Center (2025) Public trust in government: 1958-2025. December 4, 2025. https://www.pewresearch.org/politics/2025/12/04/public-trust-in-government-1958-2025/
Phelps ES (2002) Enterprise and inclusion in Italy. Springer
Phelps ES (2013) Mass flourishing: how grassroots innovation created jobs, challenge and change. Princeton University Press, Princeton
Phelps ES (2023) My journeys in economic theory. Columbia University Press, New York

Phelps ES (2024) Mass flourishing and economic dynamism. IMF F&D Magazine, September 2024. https://www.imf.org/en/publications/fandd/issues/2024/09/point-of-view-mass-flourishing-and-economic-dynamism-edmund-phelps

Pomeranz K (2000) The great divergence: China, Europe and the making of the modern world economy. Princeton University Press, Princeton

Porter ME (1979) How competitive forces shape strategy. Harvard Business Review.

Porter ME (1990) The competitive advantage of nations. The Free Press, New York

Porter ME (1998) The Adam Smith address: location, clusters, and the "new" microeconomics of competition. Bus Econ 33(1):7–13. https://www.jstor.org/stable/23487685

Powell W (2026) China's post-GDP prosperity: rising use value in an age of slowing growth. Dr Warick Powell's Substack, January 22, 2026. https://substack.com/home/post/p-179775323

Pritchett L, Summers L (2013) Asiaphoria meet regression to the mean. Federal Reserve Bank of San Francisco, Asia Economic Policy Conference, November 6, 2013. http://www.frbsf.org/economic-research/events/2013/november/asia-economic-policy-conference/program/files/Asiaphoria-Meet-Regression-to-the-Mean.pdf

Putnam RD (2001) Bowling alone: the collapse and revival of American community. Simon & Schuster, New York

Putnam RD (2015) Our kids: The American dream in crisis. Simon & Schuster, New York

Putnam RD, Campbell DE (2010) American grace: how religion divides and unites us. Simon & Schuster, New York

Qian Y (2017) How reform worked in China: the transition from plan to market. MIT Press, Cambridge, MA

Renjian T (2022) Then-Minister of Agriculture and Rural Affairs. Steadily advancing rural revitalization. *Qiushi Journal*, January 18, 2022. http://en.qstheory.cn/2022-01/18/c_699066.htm

Romer PM (1986) Increasing returns and long-run growth. J Polit Econ 94:1002–1037

Ross J (2023) Why China's socialist economy is more efficient than capitalism. Monthly Review Online, June 6, 2023. https://mronline.org/2023/06/06/why-chinas-socialist-economy-is-more-efficient-than-capitalism/#

Ross JR et al (2026) Economic analysis of China in the world: six international economists examine China's growth and global development initiatives. LID

Roubini N, Sala-I-Martin X (1991) Financial development, The Trade Regime, and Economic Growth. NBER Working Paper 3876, October 1991

Roubini N, Wolfe A (2014) China is headed for a financial crisis and a sharp slowdown. In: Fan et al (eds) The Oxford companion to the economics of China. Oxford University Press, pp 212–216

Rozelle S, Hell N (2020) Invisible China: how the urban-rural divide threatens China's rise. University of Chicago Press

Samudram M (1996) Chapter 5 growth and inflation in Malaysia. IMf eLibrary, June 24, 1996. https://www.elibrary.imf.org/display/book/9781557755421/ch007.xml

Scott S, Zengzhong SI (2020) Why China is emerging as a leader in sustainable and organic agriculture. The Conversation, April 9, 2020

Shapero J (2025) Nvidia CEO clarifies remarks about China winning 'AI race'. The Hill, November 6, 2025. https://thehill.com/policy/technology/5592818-nvidia-jensen-huang-china-ai-race/

Smithers A (2015) Efficiency of capital in developed economies shows long-term decline. Financial Times, June 17, 2015. http://blogs.ft.com/andrew-smithers/2015/06/efficiency-of-capital-in-developed-economies-shows-long-term-decline/

Sommer M (2009) Why are Japanese wages so sluggish? International Monetary Fund Working Paper WP/09/97, May 2009

Stiglitz JE (2012) From resource curse to blessing. Project Syndicate, August 12, 2012. http://www.project-syndicate.org/commentary/from-resource-curse-to-blessing-by-joseph-e%2D%2Dstiglitz

Stoler M (2019) Goliath: the 100-year war between monopoly power and democracy. Simon and Schuster

Stoler M (n.d.) BIG by Matt stoler: the history and politics of monopoly power. https://open.substack.com/pub/mattstoller
Studwell J (2008) Asian godfathers: money and power in Hong Kong and Southeast Asia, Kindle edition. Grove Press
Studwell J (2013) How Asia works: success and failure in the world's most dynamic region. Grove Press, New York, p 4
Sutherland D, Ning L (2008) Exploring and explaining the extent of concentration and diversification in Chinese Business Groups. Unpublished paper of the Nottingham University School of Contemporary Chinese Studies. http://www.ceauk.org.uk/2008-conference-papers/Chinese-Business-Group-Sutherland-Ning.doc
Thompson B (n.d.) Stratechery by Ben Thompson. The benefits of bubbles. https://youtu.be/IplmaMf1xMU?si=jZ6OJab4o399aViW
Tsurumi P (1992) Factory girls: women in the thread mills of Meiji Japan. Princeton University Press
van Wesenbeeck CFA et al (2021) Can China's overuse of fertilizer be reduced without threatening food security and farm incomes? Agric Syst 190:103093. https://www.sciencedirect.com/science/article/pii/S0308521X21000469
Wang D (2025) Breakneck: China's quest to engineer the future. W.W. Norton and Company, New York
Wang H (1991) America against America, independently published. First publication 1991, kindle edition 2021
Wang J, Whalley J (2014) Are Chinese markets for manufactured products more competitive than in the US. A comparison of China-US industrial concentration ratios. NBER Working Paper Series, Working paper 19898, Also published in Journal of Economic Literature, February 2014. http://www.nber.org/papers/w19898
Wen T (2021) Ten crises: the political economy of china's development (1949-2020). Palgrave Macmillan
Wolfe T (2002) Bonfire of the vanities. Farrar, Straus and Giroux
World Bank (2024) World development report 2024: the middle-income trap, World Development Report 2024.pdf. https://www.worldbank.org/en/publication/wdr2024
World Bank and the Development Research Center of the State Council of the People's Republic of China (2013) China 2030: building a modern, harmonious, and creative society. The World Bank
Wu T (2025) The age of extraction: how tech platforms conquered the economy and threaten our future prosperity. Knopf
Xun L (2009) The real story of Ah-Q and other tales of China, The complete fiction of Lu Xun (translated with and introduction by Julia Lovell). Penguin Books, London
Young A (1994) The tyranny of numbers: confronting the statistical realities of the East Asian growth experience. National Bureau of Economic Research, Working Paper, No. 4680, March 1994. http://www.nber.org/papers/w4680
Yu F, Guo K (2025) The value of China's consumer basket in the U.S., Japan, France, Germany, and Mexico. CF40 Research, September 23, 2025. https://www.cf40.com/report/english/2242
Zheng-Shan C (2024) A historic moment! Encouraging farmers to sell homestead. What signal? WeChat zsnc-ok, June 30, 2024
Zhu Y, Jia Y (2025) Cai Fang on Beijing's income equality playbook. The East is Read, December 11, 2025