

Law and China's Economic Growth

A Macroeconomic Perspective

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1. Introduction

Over the past several decades, a great number of scholars have devoted themselves to exploring the determinants of economic growth and to providing alternative theories on potential sources of cross-country income differences. Numerous variables, such as capital accumulation, technological progress, productivity, policy choice, the political structure, the legal system and even geography have been studied on both the theoretical level and the empirical level. The proposition that institutions matter seems to have garnered the most support and thereby has become a consensus among scholars, advisors, and even international agencies.¹

In addition, compared with informal institutions (norms for example), which can only operate effectively under a certain range of conditions such as repeated interaction, sufficient information, and small-scale group, legal institutions administered by the state are acknowledged to exert greater influence on economic performance in the modern economy.² In de Soto's words,³ the mystery of Braudel's "bell jar",⁴ or the failure of capitalism in most of the world, should be attributed to the non-existence or ineffectiveness of a formal legal system, which

turns the assets of developing countries into "dead capital".

Since the 1960s, the interaction between law and economic outcomes has been studied extensively within the discipline of law and economics. Law and economics assume that rational individuals view legal sanctions as (implicit) prices for certain kinds of activity and perform the sanctioned activities only when the expected benefits of the activities exceed the prices (expected costs). *Ceteris paribus*, the higher the costs of sanctioned activities, the less likely people are to commit them. Consequently, legal rules can guide people's behaviors in a socially desirable direction by correctly setting the prices of these behaviors. In short, the logic underlying law and economics suggests that a change in legal rules will ultimately affect economic performance, as it calls our attention to the importance of legal rules in search of the secrets of economic growth.

The connection between law and economic prosperity has been examined and, to a large extent, confirmed by numerous theoretical and empirical studies. For example, since the end of 1990s, four economists, La Porta, Lopez-de-Silanes, Shleifer, and Vishny (hereafter LLSV), have conducted a series of cross-country econometric studies to assess the role of law in financial development in particular and economic growth in general. The most notable finding of LLSV is that common law countries protect investors (shareholders and creditors) better than civil law countries (especially France) do; free of expropriation by corporate insiders, investors are more willing to finance firms, and hence, financial markets flourish in the former countries.

There are, however, some apparent anomalies to such a "law matters" hypothesis, among which China stands out as the most notable. Despite its weak legal framework, China has experienced remarkable economic growth over the last three decades and surpassed Japan as the world's second-largest economy. According to Allen *et al.*,⁵ "China is an important counterexample to the findings in the law, institutions, finance, and growth literature: Neither its legal nor financial system is well developed, yet it has one of the fastest growing economies". China is therefore often regarded as an exception or even a challenge to the belief that an efficient legal system is necessary to sustain economic development.

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1. D. Acemoglu, *Introduction to Modern Economic Growth*, Princeton University Press, Princeton, NJ 2009; E. Helpman, *The Mystery of Economic Growth*, Harvard University Press, Cambridge, MA 2004; World Bank, *Building Institutions for Markets (World Development Report 2002)*, Oxford University Press, New York 2002.

2. F.B. Cross, "Law and Economic Growth", 80 *Texas Law Review* 2002, pp. 1737-1775.

3. H. de Soto, *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, Basic Books, New York 2000.

4. The term "bell jar" comes from Braudel (*The Wheels of Commerce*, Harper and Row, New York 1982, p. 248), who stated that "the key problem is to find out why that sector of society of the past, which I would not hesitate to call capitalist, should have lived as if in a bell jar, cut off from the rest; why was it not able to expand and conquer the whole of society?". To de Soto, Braudel's "bell jar" means restricted access to the formal legal system for the great majority of people whose only alternative is to live and work outside the official law, or become extralegal.

5. F. Allen, J. Qian & M. Qian, "Law, Finance, and Economic Growth in China", 77 *Journal of Financial Economics* 2005, pp. 57-116.

This paper will contribute to the argument by examining the role of law in China's economic development from a macroeconomic perspective. Rather than focusing on microeconomic effects of specific legal rules, we will try to reveal the contribution of China's legal system to its unbalanced macroeconomic structure, which has helped it achieve excessive economic growth in the short run at the cost of environmental quality, ordinary citizens' welfare, and long-term economic health. In other words, China would have enjoyed a more efficient market system, a more equitable distribution of national income, and hence, more sustainable economic growth (with a slower but still considerable growth rate of 5 to 6%⁶) if a better legal system had been adopted. Thus, law indeed matters for China's economic development, but in a negative way.

The rest of the paper is organized as follows. Section 2 discusses the imbalance between investment and consumption in China's economy and its negative effects. Section 3 explores the role of economic policies in explaining China's unbalanced economy. Section 4 examines the relationship between how law and regulations govern factor markets and an investment-driven growth pattern. Section 5 presents our conclusion.

2. China's Unbalanced Economy

In the last thirty years, China has experienced a great transformation from a planned economy to a market economy, beginning with the restoration of household agriculture. The most remarkable consequence of this transformation is the massive expansion of China's economy, which is now the second largest in the world, only after the United States, with a nominal GDP of US \$5.87 trillion in 2010. Another salient outcome of this process is the universal increase in living standards that have elevated hundreds of millions of Chinese out of absolute poverty⁷ and helped China join the group of

middle-income countries.⁸ This transformation finally allows China to become a global economic superpower, and with the current slowdown of other principal economies (especially the US), the chief driver of world growth.

It is, however, too early for the Chinese to celebrate their economic miracle. For one thing, China's GDP per capita was still only around US\$4000 in 2010, equivalent to 10% of the income levels of the US, Japan, and most West European countries. In terms of per capita income level, China was ranked 94th of a total of 183 economies covered in the IMF's *World Economic Outlook Database*. For another, the challenges facing China are still severe. In recent years, scholars and politicians have expressed more and more concerns about the sustainability of China's growth. For example, Yongding Yu, a respected Chinese economist, argues that "China has reached a crucial juncture: without painful structural adjustments, the momentum of its economic growth could suddenly be lost".⁹ At his press conference following the close of the annual meeting of China's legislature in March 2007, Premier Jiabao Wen also noted that China's economic growth is "unstable, unbalanced, uncoordinated, and unsustainable".

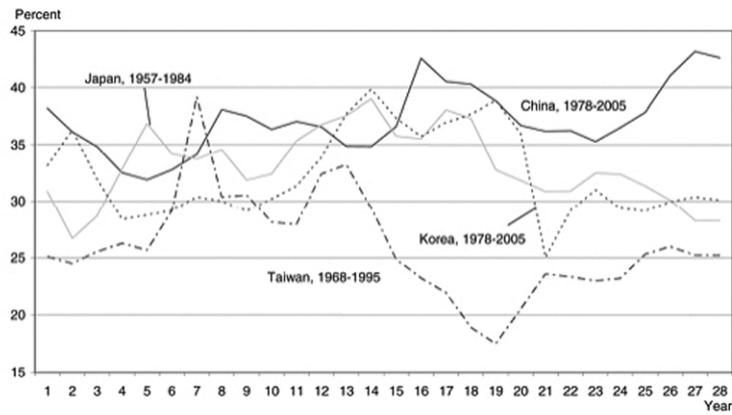
Most of the concerns are about a fundamental imbalance in China's economy, namely the imbalance between investment and consumption. Theoretically, in all economies, the expansion of output is the sum of the growth of consumption plus investment plus net exports of goods and services. A key feature of China's growth pattern is that expanding investment rather than increasing consumption, which is the most significant factor contributing to GDP growth of other major economies, has been a major and increasingly important driver of China's growth.¹⁰ China can therefore be described as an investment-driven economy whose nature is unsustainable and whose practice has a welfare-diminishing effect.¹¹

As Lardy shows (see figure 1), investment averaged 36% of GDP in the first decade or so of economic reform, relatively high by the standards of developing countries generally but not in comparison with China's East Asian neighbors when their investment shares were at their highest. However, since the beginning of the 1990s, China's investment rate has trended up. In 1993 and again in both 2004 and 2005, investment as

6. According to the estimation of Perkins and Rawski ('Forecasting China's Economic Growth to 2025', in L. Brandt & T.G. Rawski (eds.), *China's Great Economic Transformation*, Cambridge University Press, New York 2008), the average annual contribution of fixed capital to overall GDP growth during 2005-2025 varies only between 2.4 and 3.9%. Therefore, if China has to rely entirely on inputs of labor and fixed capital for growth over the period of 2005-2025, the nation's GDP growth rate cannot exceed 4.7%. To sustain a high growth rate, 9% for example, China would have to push the annual growth of TFP above 4%, which is an impossible task. They therefore conclude that Chinese GDP will grow at a rate from 6-8% per year over the period of 2005-2015 and that sometime in the second decade, the economy will slow to a rate of GDP growth that could be as low as 5% or as high as 7% per year. In fact, in three nations (regions) that can be said to have economies similar to that of China, namely Japan, Republic of Korea, and Taiwan, growth proceeded for either two decades (Japan) or three decades (Korea and Taiwan) at rates that averaged more than 8% per year. But all three eventually slowed down never to grow at rates that high again.
7. M. Ravallion & S. Chen, "China's (Uneven) Progress Against Poverty", *82 Journal of Development Economics* 2007, pp. 1-42.

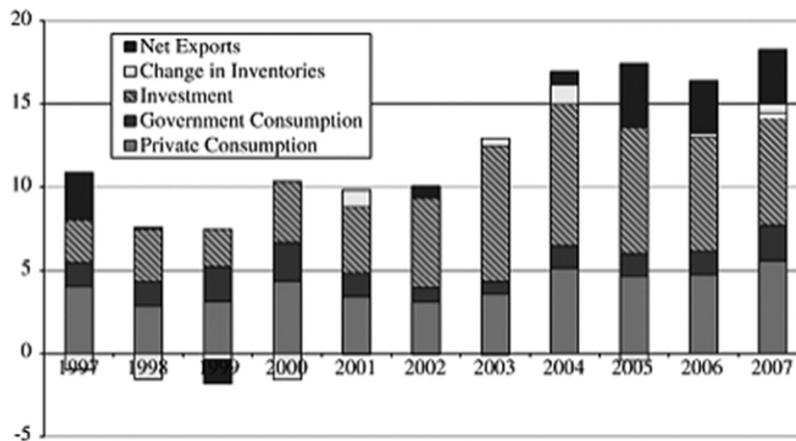
8. China's per capita gross national income hit US\$2,770 in 2008, which means that the country has entered the list of lower-middle-income countries, according to the criteria of World Bank. In 2010, China crossed the threshold of upper-middle-income countries.
9. Y. Yu, "A Different Road Forward", *China Daily*, 23 December 2010.
10. E.S. Prasad & R.G. Rajan, "Modernizing China's Growth Paradigm", *96 American Economic Review* 2, 2006, pp. 331-336; N.R. Lardy, "China: Rebalancing Economic Growth", in C.F. Bergsten, B. Gill, N.R. Lardy & D.J. Mitchell (eds.), *The China Balance Sheet in 2007 and Beyond*, The Center for Strategic and International Studies and the Peterson Institute for International Economics, Washington, D.C. 2007.
11. As Prasad & Rajan 2006 put it clearly, it is ultimately consumption rather than investment or even GDP that is a better measure of economic welfare over the long term.

Figure 1. Capital Formation as Percent of GDP



Source: Lardy 2007

Figure 2. Contributions of Components to Nominal GDP Growth



Source: Prasad (2009)

a share of GDP reached 43%,¹² a level well above that of China's East Asian neighbors in their high-growth periods. In addition, while the longest period that any other Asian country had maintained an investment to GDP ratio in excess of 33% was nine years (Thailand from 1989 to 1997, and Singapore from 1991 to 1999), China is now in the fourteenth year of its investment boom.¹³ While TFP (Total Factor Productivity) has contributed significantly to China's economic growth since the introduction of reforms at the end of the 1970s, its importance is estimated to have declined over time. By contrast, the contribution of capital accumulation to GDP growth is increasingly high. For example, Kuijs and Wang¹⁴ show that growth in capital stock has contributed to more than half of China's GDP growth for the 1978-2004 period, while TFP growth contributed

one third and employment growth contributed the modest remainder. In addition, splitting the sample into two periods, they find that between 1993 and 2004, the contribution of capital accumulation to GDP growth was even higher, at 62%. This argument is further supported by Prasad¹⁵ (see figure 2).

The growth of consumption has been rapid in absolute terms throughout the reform period, but it has lagged behind the underlying growth of the economy.¹⁶ In the 1980s, household consumption averaged slightly more than half of GDP. This share fell to an average of 46% in the 1990s. However, after 2000, household consumption as a share of GDP fell sharply, and by 2005, it accounted for only 38% of GDP, the lowest share of any major economy in the world. In the United States household consumption accounted for 70% of GDP in the same year. In India, it was 61%. Even in Japan, famous for its high household savings, household consumption in 2005 accounted for 57% of GDP.

12. In 2009, this ratio reached an unprecedented 47% due to China's economic stimulus program, which was enacted as a response to the global economic crisis originating in the United States in 2008.
 13. Pivot Capital Management, 2009. "China's Investment Boom: The Great Leap into the Unknown", <www.pivotcapital.com>.
 14. L. Kuijs & T. Wang, "China's Pattern of Growth: Moving to Sustainability and Reducing Inequality", 14 *China and World Economy* 1, 2006, pp. 1-14.

15. E.S. Prasad, "Is the Chinese Growth Miracle Built to Last?", 20 *China Economic Review* 2009, pp. 103-123.
 16. Lardy 2007.

This investment-driven growth has resulted in some developments that are increasingly seen as problematic by both scholars and policymakers. The first shortcoming of the current growth pattern is the increase in energy consumption and its detrimental effects on the environment. As He and Kuijs¹⁷ show, investment and industry go hand-in-hand.¹⁸ Industry-led growth requires a particularly high level of energy consumption, which is damaging to the environment. China's energy consumption increased 70% between 2000 and 2005, and China has become the second largest energy consumer after the United States. China now consumes more than 30% of the world total production of coal, steel, tin and cement. While China's energy elasticity of GDP growth (the number of units of energy required to produce an additional unit of output) averaged a modest 0.4 in the 1980s, this ratio almost tripled to an average of 1.1 in 2001–2006.^{19,20}

Environmental degradation has imposed serious costs on the Chinese economy and reduced the well-being of the Chinese population. For example, Yusuf and Nabeshima²¹ report that nearly 38% of river waters in China were considered to be severely polluted in 2000; among the seven major river basins, just 42% of the waterways reached grade-three standards, while 28% failed to achieve even grade five.²² In addition, China is now the second-largest emitter of greenhouse gases and is home to 16 of the 20 cities with the worst air pollution on the globe.²³ In 2001, two out of three cities in China failed to meet the residential ambient air quality standards of the State Environmental Protection Administration (SEPA), and air quality problems cause more than 400,000 premature deaths annually.²⁴ A report issued by the World Bank in 2007 indicates that the total cost of air and water pollution in China in 2003 was 781 billion Yuan, or approximately 5.78% of GDP.²⁵

17. J. He & L. Kuijs, "Rebalancing China's Economy-Modeling a Policy Package", *World Bank China Research Paper*, No. 7, 2007.

18. Industrial value increased on average 12.6% per year between 1990 and 2006, and the share of industry in GDP rose from 42% in 1990 to almost 49% in 2006 in current prices, among the highest for any country since the 1960s. In fact, the increase would have been larger but for the decline in relative prices of industry. In constant prices of 1995, the share of industry in GDP rose from 37% in 1990 to 53.5% in 2006. In 2003–06, industry contributed 60% of total GDP growth, compared to 6% by agriculture and 34% by the services sector.

19. S. Yusuf & K. Nabeshima, *China's Development Priorities*, World Bank, Washington, D.C., 2006, p. 22, argue that a better comparison is energy consumption per unit of production for particular industries or products. They show that the average value of energy consumption for thirteen products in eleven major industrial sectors of China was higher than international levels of developed countries by 6 to 36% in 2000.

20. National Bureau of Statistics of China, *China Statistical Abstract 2006*, China Statistics Press, Beijing 2006, p. 147.

21. Yusuf & Nabeshima 2006, p. 24.

22. Water quality below grade five means that the water is literally toxic. It is unsafe for human contact, unsuitable even for irrigation, and cannot be safely purified for human uses. Grade three is the standard for direct human contact and also for use in purification for drinking water.

23. Lardy 2007.

24. Yusuf & Nabeshima 2006, pp. 25, 27.

25. World Bank, *Cost of Pollution in China: Economic Estimates of Physical Damages*, World Bank, Washington, D.C. 2007.

Second, the disproportionate capital-intensive pattern of growth appears to have contributed to a slower pace of job creation as well as to urban-rural inequality. Between 1978 and 1993, employment expanded by 2.5% per annum, but between 1993 and 2004, when the investment share of GDP was much higher than in the 1980s, employment growth slowed to only slightly over 1%.²⁶ Correspondingly, urban employment growth decreased from 5.4% per year during 1978–1993 to 2.9% during 1993–2004, which means a slower relocation of labor from the agricultural and the rural areas where productivity and income are much lower. The persistent productivity gap between agriculture and the rest of the economy has exacerbated rural-urban income inequality and is an important reason behind the increase in the rural-urban income gap from 2.2 in 1990 to 3.3 in 2006.²⁷

Third, China's high investment leads to the continuous expansion of production capacity,²⁸ which along with a lagging internal demand (consumption), raises the risk of deflation and recession. External demand is therefore relied on to mop up the overcapacity, and China's economic growth accordingly becomes heavily export-dependent. Net exports have increased dramatically in recent years, raising the ratio of net exports to GDP from approximately 2% to close to 10% between 2001 and 2009.²⁹ Excessive reliance on external demand helps China sustain a considerable GDP growth, but it then exposes China to huge economic risks, both internationally and domestically. On the one hand, given China's economic size, an export-oriented growth pattern will inevitably contribute to a global economic imbalance and trigger trade tension.³⁰ On the other hand, the rising current account surplus,³¹ a result of export-oriented growth, raises a tough question for China's monetary

26. Kuijs & Wang 2006.

27. He & Kuijs 2007.

28. See Pivot Capital Management "China's Investment Boom: The Great Leap into the Unknown", 2009 <www.pivotcapital.com> on China's ample manufacturing capacity.

29. This growth, in turn, has led to a substantial expansion of China's global market share, reaching 9.3% of world goods exports in 2008 (up from 3.5% in 1999) (K. Guo & P. N'Diaye, "Is China's Export-Oriented Growth Sustainable", *International Monetary Fund Working Paper*, 09/172, 2009). A further increase in market share, which would be required in order to bring about more economic growth, is very difficult to achieve, as Guo and N'Diaye 2009 have shown. In other words, export-oriented growth is not sustainable.

30. For example, F.C. Bergsten, C. Freeman, N.R. Lardy & D.J. Mitchell (*China's Rise: Challenges and Opportunities*, The Center for Strategic and International Studies and the Peterson Institute for International Economics, Washington, D.C. 2008, p. 14) claim that "[o]n trade, China has been playing at best a passive and at worst a disruptive role with respect to the global system". While "[t]he US current account deficit is, of course, at the heart of the global imbalance and stems largely from internal US economic problems and policy errors", China's large trade surpluses "compound the problem substantially".

31. In 2006, China's current account surplus reached \$249 billion, making China the world's largest current account surplus country; the surplus expanded further to \$372 billion, or 11% of GDP in 2007, both unprecedented for a large country that is not a large exporter of resources such as oil. In 2007, China's current account surplus as a share of GDP was almost three times that of Japan in the mid-1980s, when its current account surplus as a share of GDP peaked (Bergsten *et al.* 2008, p. 114).

authority, which tries to maintain a stable (but arguably undervalued) exchange rate relative to the US dollar to promote export, but at the same time, it must sterilize the liquidity generated by the large influx of capital. The independence of China's monetary policy has been severely weakened by the undervalued currency strategy.³²

Finally, the Solow model has shown that without technological progress, the ability of an economy to raise output per capita via capital accumulation is limited. The impact on GDP growth of capital accumulation will continuously decline due to the principle of diminishing returns. China's investment efficiency has deteriorated due to an increasing, incremental capital-output ratio (ICOR)³³ in the past two decades, which means that a greater share of GDP has to be invested to maintain a fixed economic growth rate. In fact, as Kuijs and Wang have shown, if China's current economic growth pattern is continued, it would require an investment-to-GDP ratio that would require an unprecedented level of 55% on average in 2014-2024 to maintain GDP growth of 8% per year. It is impossible to finance such a high level of investment in the long run, and the investment-driven economy will finally reach its dead end.

3. Why an Unbalanced Economy: The Role of Policies

Numerous studies have emerged to explore the causes of China's unbalanced economy, especially the low share of private consumption in GDP. Despite debates over more specific issues, such as whether weakened household income or increased saving rates contribute more to continuing decreased consumption, there is agreement that China's fiscal policy, monetary policy, and financial system should be primarily responsible for the formation and continuation of the current growth pattern. The policy implication of these studies is that China should and is able to promote domestic consumption demand as a more important source of economic growth via significant economic policy changes, such as liberalizing interest rates and exchange rates, allocating more public expenditure to social programs, deregulating financial markets, etc.

While China's financial system has experienced fundamental changes and consequently achieved remarkable improvement in its performance, there remain some underlying problems, especially interest rate controls. China's central bank, the People's Bank of China (PBC),

which controls monetary policy, continues to place caps on the interest rates that banks can pay on deposits and floors on the interest rates that they can charge on loans. The resultant declining returns on savings, equivalent to an implicit tax imposed on households,³⁴ have depressed disposable household income as a percentage of GDP and have provided a massive subsidy for corporate borrowers.

Households' interest income, which accounts for approximately 80% of households' investment income, has fallen as a share of GDP since the early 1990s. Although household deposits in the banking system as a share of GDP increased by about two thirds between the early 1990s and 2003, pre-tax interest earnings generated by these savings declined from an average of approximately 5% in 1992-1995 to only 2.5% of GDP in 2003.³⁵ If interest earnings after the early 1990s had grown in line with the stock of household bank deposits, by 2003, the contribution of interest income to household disposable income would have been 8.9% of GDP, 6.4% points greater than the actual contribution.

By contrast, enterprises, especially State-Owned Enterprises (SOEs), which are the most favored clients of China's banking system³⁶ (one dominated by the Big Four state-owned commercial banks),³⁷ might be the major beneficiary of interest rate controls. Ma and Wang³⁸ find that net interest payments as a share of GDP by the non-financial corporate sector dropped by 50% between 1992 and 2007. Lardy estimates that the net benefit in the first quarter of 2008 to the corporate sector from interest rate controls, or "financial repression" to use Lardy's term, was CNY 55 billion, a little less than 1% of GDP. In particular, SOEs benefit disproportionately from such financial repression. For example, Ferri and Liu³⁹ show that the costs of financing for SOEs are significantly lower than for other com-

32. Prasad 2009.

33. ICOR is defined as the ratio of Gross Fixed Capital Formation (a broad definition of investment) to GDP divided by real GDP growth. The lower the ratio is, the more efficiently capital spending can generate growth. For a more detailed discussion on ICOR in China, see D.O. Beim, "The Future of Chinese Growth", *Columbia Business School Working Paper*, 2011.

34. For example, Lardy ("Financial Repression in China", The Peterson Institute for International Economics, *Policy Brief* 08-8, 2008) shows that, in February 2002, the PBC fixed the maximum interest rate banks could pay on demand deposits at 0.72%, a rate that did not change until 2008. But inflation, as measured by the CPI, increased from -0.8% in 2002 to 8% in the first quarter of 2008. Thus, the real rate of return on demand deposits went from 1.52 to -7.28%. Similarly, inflation converted the real return of one-year term deposits from 2.78% in 2002 into -3.86 in the first quarter of 2008. Lardy 2008 further estimates that, due to interest rate ceilings, the loss to the savers in the first quarter of 2008 was RMB 255 billion (\$36 billion), the equivalent of 4.1% of GDP.

35. Bergsten *et al.* 2008, p. 118.

36. For example, Brandt & Zhu (L. Brandt & X. Zhu, "China's Banking Sector and Economic Growth", in C. Calomiris (ed.), *China's Financial Transition at a Crossroads*, Columbia University Press, New York 2007) find that over the period 1998-2003, the state sector, defined to include shareholding companies in which governments have significant ownership shares, continued to absorb between half and two thirds of new bank lending.

37. W. Dobson & A.K. Kashyap, "The Contradiction in China's Gradualist Banking Reforms", 2 *Brookings Papers on Economic Activity* 2006, pp. 103-148.

38. G. Ma & W. Yi, "China's High Saving Rate: Myth and Reality", *Bank for International Settlements Working Paper*, No. 312, 2010.

39. G. Ferri & L.-G. Liu, "Honor Thy Creditors Before Thy Shareholders: Are the Profits of Chinese State-Owned Enterprises Real", 9 *Asian Economic Papers* 3, 2010, pp. 50-71.

panies, especially private enterprises; if SOEs were made to pay the same interest rates as private enterprises, their existing profits would be entirely wiped out.

The low cost of financing, together with other factors such as a low dividend payment⁴⁰ and low labor compensation, has led to a significant increase in the profitability of enterprises since the early 1990s. While the nominal firm profits increased more than 15-fold from 1992 to 2007, the ratio of profits to increased industrial value also improved remarkably from approximately 21% in the late 1990s to close to 30% in 2007.⁴¹ The lack of attractive financial investments means that firms will either choose to spend their retained earnings on investment projects to expand capacity or put them in a low-yielding bank deposit. In other words, the implication of the distorted interest rate structure is that firms face a very low hurdle when deciding whether to pursue a given investment project. In summary, restricted bank lending rates and retained earnings have kept the cost of investment funds very low and hence have helped China achieve one of the highest ratios of investment⁴² to GDP in the world.⁴³

In addition to interest rate controls, there are other distortions created by China's financial system that arguably lower the cost of capital and lead to higher investment. For example, Aziz⁴⁴ claims that nonperforming bank loans (NPLs) in China may have been a major conduit through which investment was supported, in the sense that loans would become cheap credit when firms were able to default on their loans without facing significant punitive actions. Aziz and Cui⁴⁵ show that weakness in the financial sector, *e.g.*, restricting firms' access to bank financing for working capital to pay wages and

other current expenditures, has played an important role in keeping wages low.

China's fiscal policy is another measure that can be blamed for helping to shape the unbalanced economy. On the one hand, for years, the growth rate of China's fiscal revenue has outpaced that of the economy as a whole, as well as that of household incomes (see figure 3). The institutional foundation behind the rise in fiscal revenues can be traced back to the 1994 Fiscal Reform in China that managed to reverse a declining trend in state revenues beginning in the mid-1980s. The reform is so successful that the proportion of disposable income of the government to the national income has been boosted from 19% in 1992 to 24% in 2007. On the other hand, there are some institutional defects in China's public spending system. A report issued by OECD concludes that "[c]apital spending and public administration take a large and, until recently, increasing share of China's overall public spending. In contrast, the portion devoted to certain human capital and other developmental needs, such as education, health, and science and technology, appear somewhat low, both in relation to international standards and China's own goals".⁴⁶ The incommensurability between the tax burden and the availability of public services may justify China's second place in Forbes' "tax misery" ranking.⁴⁷

One important reason for the rise in the savings rate, and hence the decline in household consumption, is the reduction in the social services provided by the government. In the past, SOEs employed most workers and provided basic social services directly to their employees. However, the reform of the SOEs at the beginning of the 1990s shifted these obligations from the shoulders of the SOEs to that of local governments. Given China's highly decentralized fiscal system, different local governments with different fiscal revenues provide differ-

40. Yang *et al.* ("Why Are Saving Rates so High in China", *NBER Working Paper* 16771, 2011) report that the ratio of total dividend payment to the total value added of enterprises was less than 0.5% in 2007. Part of the story is that the Chinese government did not ask SOEs to pay dividends until 2008.

41. Yang *et al.* 2011.

42. It is very hard to estimate how many investments are undertaken under favorable interest rates. We can get the data on the financing of fixed asset investment and hence estimate the significance of bank loans in investment financing. For example, Barnett & Brooks ("What's Driving Investment in China", *International Monetary Fund Working Paper*, 06/265, 2006) report that after retained earnings, bank loans are the next most important source of financing. Based on bank data, bank loans contributed one-fifth of total investment funding, as they exclude personal mortgage lending. Adding mortgage lending to domestic loans raises the share of bank financing to a peak of 27% in 2003 but a somewhat lower rate in recent years. We may therefore argue that 27% of total investment was implemented under distorted interest rates in 2003. This method of assessment, however, underestimates the magnitude of interest subsidy. For one thing, some loans intended for working capital (about one-third of bank loans) may have funded investment but were not recorded in the investment funding data. For another, part of the most important source of investment financing, retained earnings, derived from prior interest subsidies *per se*.

43. J. Aziz & S. Dunaway, "China's Rebalancing Act", 44 *Finance and Development* 3, 2007, pp. 27-31.

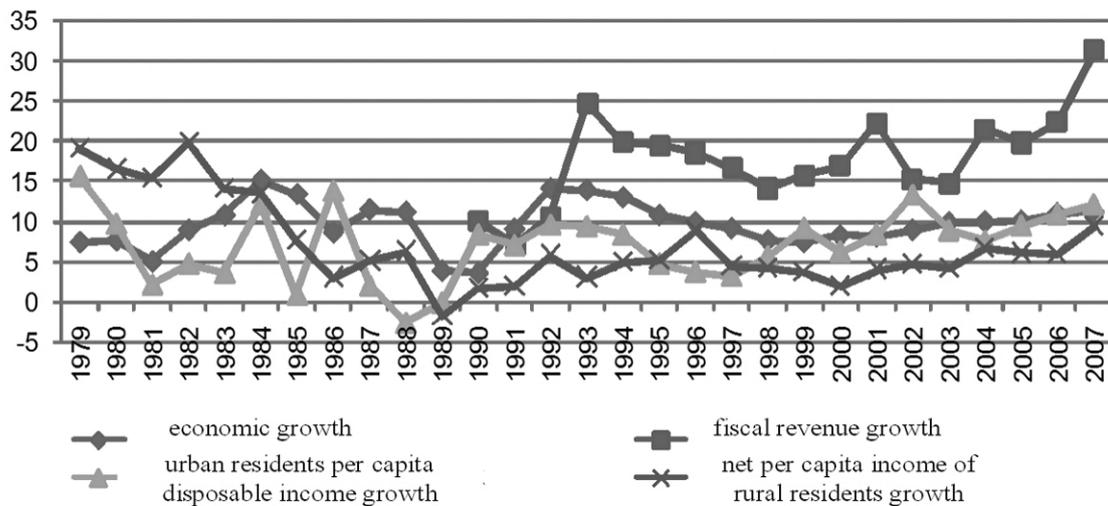
44. J. Aziz, "Rebalancing China's Economy: What Dose Growth Theory Tell Us", *International Monetary Fund Working Paper*, 06/291, 2006.

45. J. Aziz & L. Cui, "Explaining China's Low Consumption: The Neglected Role of Household Income", *International Monetary Fund Working Paper*, 07/181, 2007.

46. OECD (*Challenges for China's Public Spending: Toward Greater Effectiveness and Equity*, OECD Publishing, Paris 2006, p. 48) reports that China's spending in the category of culture, education, public health, and science could be as high as 13.8% of total spending or over 5% of GDP in 2003. China's spending in this broad category was well below the unweighted OECD average of 28.2% and lower than that of any OECD country for which data were available for 2002.

47. See <www.forbes.com/global/2009/0413/034-tax-misery-reform-index.html>.

Figure 3. China's Extraordinary Fiscal Revenue Growth



Source: National Bureau of Statistics of China

ent levels of public services,⁴⁸ and the local governments in many locations do not have adequate resources to fund basic social services.⁴⁹ The increased risk faced by households that incur significant health or education expenditures, therefore, has played a significant role in the rise of the savings rate. For example, Chamon and Prasad⁵⁰ show that the rising private burden of social expenditure has driven the increase in the household savings rate, as younger families accumulate assets for future education spending and older families prepare for uncertain health expenses. Similarly, Qi and Prime⁵¹ find that local government expenditures on health and education are significant and have a relatively large effect on consumption.⁵²

Finally, it seems that the current growth pattern is self-reinforcing, and therefore, a rebalancing cannot be expected to occur as a result of market forces. As the

McKinsey Global Institute⁵³ has shown, sectors related to consumer spending tend to create more jobs per unit of investment than do industrial sectors.⁵⁴ In other words, China's investment-oriented growth, which is more favorable to capital-intensive means of production, fails to generate enough employment to match the number of available workers, and this, in turn, has suppressed household income. Consequently, China's household share of national income has declined from approximately 59% in 1992 to 53% in 2007, and around one third of the change in consumption behavior from 2000–2007 can be directly attributed to the decline in household income.^{55,56} This vicious circle (namely that high investment leads to low consumption, and low consumption makes investment more appealing) can hardly be broken without some fundamental policy changes.

48. Dollar ("Poverty, Inequality and Social Disparities during China's Economic Reform", *World Bank Policy Research Working Paper* 4253, 2007) reports that up through 1990, there were only modest differences among the provinces in the infant survival rate, but by 2000, there had emerged a very sharp difference, closely related to the province's per capita GDP. So too with the high school enrollment rate: there used to be only small differences between provinces. By 2003, high-school enrollment was nearing 100% in the wealthier provinces while it was still less than 40% in poor provinces.

49. Dollar 2007.

50. M.D. Chamon & E.S. Prasad, "Why Are Saving Rates of Urban Households in China Rising?", *2 American Economic Journal: Macroeconomics* 1, 2010, pp. 93-130.

51. L. Qi & P.B. Prime, "Market Reforms and Consumption Puzzles in China", *20 China Economic Review* 2009, pp. 388-401.

52. See also Barnett & Brooks, "China: Does Government Health and Education Spending Boost Consumption", *International Monetary Fund Working Paper* 10/16, 2010, who show that one CNY increase in government health spending is associated with a two CNY increase in urban household consumption, and Baldacci *et al.* ("Public Expenditure on Social Programs and Household Consumption in China", *International Monetary Fund Working Paper*, 10/69, 2010), who find that a 1% increase in GDP in public expenditures, distributed equally across education, health, and pensions, would result in a permanent increase in household consumption of 1.2% of GDP.

53. McKinsey Global Institute, "If You've Got It, Spend It: Unleashing the Chinese Consumer", 2009 <www.mckinsey.com/mgi/reports/pdfs/unleashing_chinese_consumer/MGI_Unleashing_Chinese_Consumer_full_report.pdf>.

54. For example, when examining the period from 2000 to 2007, they find that each additional million dollars of investment in the mining industry created only 0.1 new jobs on average; the same million dollars of investment in the retail, wholesale, restaurant, and hotel sectors created 2.4 new jobs.

55. See also Baldacci *et al.* 2010, who show that an increase in the household savings rate accounts for about 9% of the approximately 13% of GDP decline in the household consumption ratio between 1990 and 2007. The rest can be explained by a drop in the share of household disposable income in GDP over the same period.

56. K. Guo & P. N'Diaye, "Determinants of China's Private Consumption: An International Perspective", *International Monetary Fund Working Paper*, 10/93, 2010.

4. Why an Unbalanced Economy: Law Matters

We will show in this section that, in addition to monetary and fiscal policies, law and regulations which have been used by the government, intentionally or unintentionally, to distort factor markets, are another important contributor to China's unbalanced economy. As Huang⁵⁷ and Huang and Tao⁵⁸ show, factor markets, including markets for labor, capital, land, energy, and the environment, are regulated in a manner that depresses factor prices and hence lowers production costs. These distortions artificially increase production profits, raise investment returns, improve the international competitiveness of Chinese goods, and therefore increase China's growth. Moreover, these cost distortions are the equivalent of a tax on the owners of factors, mainly households and consumers, and hence reduce households' incomes and depress consumer spending. As a result, there emerges a structural imbalance that endangers China's long-term economic sustainability.

Local governments play an important role in the game of cost distortion. Under the cadre evaluation system used by the Communist Party, which sets criteria for the performance and hence the remuneration and promotion prospects of local party cadres and government officials, the most heavily weighted performance criteria emphasize promoting economic growth⁵⁹ and collecting tax revenues.⁶⁰ Local officials thus have extremely strong incentives to pursue economic growth, which can be more easily achieved through investment rather than consumption. As Huang⁶¹ shows, local governments, under the widespread competition for *zhaoshang yinzi* ("attracting business and investment"), have made every effort to attract foreign and domestic enterprises, by "providing land and related infrastructural support below cost, plus special subsidies and tax privileges, and also circumventing formal rules and regulations on labor use and environmental protections".

As we have shown in section 3, China still exhibits typical symptoms of a financially repressed economy, such as regulated interest rates, controlled exchange rates, and managed credit allocation. The consequent low cost

of the capital environment,⁶² which benefits the corporate sector at the expense of the welfare of households, is regarded as the most important cause of China's investment-dominated and industry-led growth pattern.⁶³ While most countries across the globe have had controlled interest rates and credit allocation at one point in their recent history, they ultimately removed these restrictions in view of the undesirable outcomes of such financial repression. In most cases, interest rate liberalization led to higher real interest rates, shifted surplus from borrowers to savers more efficiently, and allowed those who were previously crowded out to have access to credit.⁶⁴ Further financial reforms, especially interest rate liberalization, are therefore needed to correct the distortions in financial markets.

Labor costs are also distorted by some legal and institutional arrangements, especially by China's notorious hukou (household registration) system. The hukou system was introduced in the late 1950s as a major instrument of migration control.⁶⁵ According to the *Regulations of the People's Republic of China on Household Registration* issued in 1958, hukou designates a person's legal place of residence and work at the time of his or her birth based on the locality of the mother's registration. Possession of the appropriate hukou (agricultural versus nonagricultural) also determines one's access to various amenities and social services, such as health care, schooling, and, until recently, rationed or subsidized food products that were provided only to urban residents.⁶⁶ In general, the hukou system was considered a necessary component of the centrally planned economy, which enabled the government to allocate human resources not only at the enterprise and sectoral levels but also across geographic locations.⁶⁷

Because of the inefficiency associated with labor misallocation, the hukou system has been modified since

57. Y. Huang, "China's Great Ascendancy and Structural Risks: Consequences of Asymmetric Market Liberalization", 24 *Asian-Pacific Economic Literature* 1, 2012, pp. 65-85.

58. Y. Huang & K. Tao, "Factor Market Distortion and the Current Account Surplus in China", 9 *Asian Economic Papers* 3, 2010, pp. 1-36.

59. For example, H. Li & Z. Li-An, "Political Turnover and Economic Performance: The Incentive Role of Personnel Control in China", 89 *Journal of Public Economics* 2005, pp. 1743-1762 show that the likelihood of promotion of provincial leaders increases with their economic performance (GDP growth), while the likelihood of termination decreases with their economic performance.

60. D. Clarke, P. Murrell & S. Whiting, "The Role of Law in China's Economic Development", in L. Brandt & T.G. Rawski (eds.), *China's Great Economic Transformation*, Cambridge University Press, Cambridge 2008.

61. P.C.C. Huang, "The Theoretical and Practical Implications of China's Development Experience: The Role of Informal Economic Practices", 37 *Modern China* 1, 2011, pp. 3-43.

62. Huang *et al.* 2011 compare the relationship between GDP growth potential and government bond yields across countries based on the theory that nominal GDP growth potential indicates the average return on investment and that risk-free government bond yields should therefore converge with this rate of return. They find that the gap in China is around 8-10 percentagepoints, which is high compared with 6.5 pp in India, 6.2 pp in Thailand, 5.7 pp in Malaysia and 2.6 pp in Korea at the end of 2008. In addition, they show that while the one-year base lending rate was below 6% at the start of 2011, the interest rate in the informal lending market in Zhejiang province was above 20%.

63. Y. Huang, J. Chang & L. Yang, "China: Beyond the Miracle", *Barclays Capital Economics Research* 2011.

64. T. Feyzioğlu, N. Porter & E. Takáts, "Interest Rate Liberalization in China", *International Monetary Fund Working Paper*, 09/171, 2009.

65. For more details on the hukou system, see K. Wing Chan & L. Zhang, "The Hukou System and Rural-Urban Migration in China: Processes and Changes", 160 *China Quarterly* 1999, pp. 818-855; T. Cheng & M. Selden, "The Origins and Social Consequences of China's Hukou System", 139 *China Quarterly* 1994, pp. 644-668, and F. Wang, *Organizing Through Division and Exclusion: China's Hukou System*, Stanford University Press, Stanford 2005.

66. B.M. Fleisher & D. Tao Yang, "Problems of China's Rural Labor Markets and Rural-Urban Migration", 39 *Chinese Economy* 3, 2006, pp. 6-25.

67. Z. Liu, "Institutions and Inequality: The Hukou System in China", 33 *Journal of Comparative Economics* 2005, pp. 133-157.

the 1980s,⁶⁸ and China's labor market has therefore undergone a remarkable transformation. Growing numbers of workers are flowing from agriculture to industry and from rural areas to urban areas. From 1978 to 2005, the share of labor that was employed primarily in agriculture fell from 71 to 45%, while the share of labor working in urban areas increased from 24 to 36%.⁶⁹ Given the severe distortions at the beginning of the reform, the subsequent labor movements from the lower-productivity sector (agriculture) to the higher-productivity sector (nonagricultural) became a major source of economic growth.⁷⁰

Although the harsh restrictions on rural-urban migration have gradually been eased, the hukou system still remains a critical barrier⁷¹ to the development of an integrated labor market. Compared with urban residents who have secure jobs, receive high salaries, and are entitled to many social benefits, the migrants suffer considerable discrimination and exploitation in the labor market. For example, Knight and Song report that the migrants face both job discrimination⁷² and wage discrimination.⁷³ Similarly, Meng and Zhang⁷⁴ find a significant difference in job placement and wages between rural migrants and urban residents, and most of the difference cannot be explained by the productivity-related difference between the two groups.⁷⁵ In addition to job

and wage discrimination, there are also differences between urban residents and migrants with respect to non-income welfare measures. Park and Wang⁷⁶ show that the per capita, average square-footage of migrants' housing is much smaller than that of local residents, and migrant housing has a much lower rate of available drinking water, sewage, and heating. Moreover, migrants have almost no chance of obtaining a valuable pension, unemployment insurance, or health insurance benefits.⁷⁷ Finally, migrants must pay significantly higher school fees⁷⁸ for their children if they do not have a local hukou. In general, rural migrant workers in urban China are said to live a "marginalized life"⁷⁹ and have therefore become a "new underclass".⁸⁰

There are some other institutional weaknesses contributing to the depressed incomes of rural migrants. For example, while Chinese labor legislation stipulates workers' individual rights regarding contracts, wages, working conditions, and so on, it fails to provide them with collective rights, namely, the rights to organize, to strike, and to bargain collectively in a meaningful sense.⁸¹ The lack of collective rights therefore renders workers' individual rights vulnerable (and they are often disregarded). The abuse of the workers' rights, in the form of a breach of contract, unpaid wages, excessive overtime, horrible working conditions, industrial injuries, and abusive management is prevalent.⁸²

The price of land for industrial use has been artificially lowered because local governments frequently take land from farmers for insufficient compensation and then offer it to investors at discounted or even zero cost to attract investment and promote growth. According to Article 10 of China's 1982 Constitution, the state owns the land in cities, while land in rural and suburban areas belongs to the rural collectives except the land that has already been defined as state-owned. Unless it is to be converted to state-owned land through the land-taking process, which requires that the purpose of the land-

68. See, for example, Immigration and Refugee Board of Canada, *China: Reforms of the Household Registration System (Hukou) (1998-2004)*, 2005, available on www.unhcr.org/refworld/pdfid/4305fbc04.pdf, on the reforms of China's hukou system.

69. F. Cai, A. Park & Y. Zhao, "The Chinese Labor Market in the Reform Era", in L. Brandt & T.G. Rawski (eds.), *China's Great Economic Transformation*, Cambridge University Press, New York 2008.

70. The estimates by the World Bank (*China 2020: Development Challenges in the New Century*, World Bank, Washington, D.C. 1997) suggest that labor mobility contributed 1.5% to the annual GDP growth rate of 9.4% over the period 1978 to 1995, that is, 16% of the GDP growth of that period.

71. In addition to the hukou system, local governments have pursued other active policies of regulating the influx of migrants in order to protect their own residents. See, for example, J. Knight & L. Song, "Employment Constraints and Sub-Optimality in Chinese Enterprises", 51 *Oxford Economic Papers* 1999, pp. 284-299.

72. From a survey covering 2,900 migrants, who were employed in 118 enterprises located in four cities, they show that the occupational composition of migrants and non-migrants is sharply different: only 1% of the former but 19% of the latter are managerial and technical staff, whereas 68% of the former and 48% of the latter are production workers. Part of the observed difference in occupational distribution is due to the greater human capital of urban workers. However, the lower human capital of migrant workers cannot explain many of their disadvantages.

73. The marginal product of migrants is more than three times their wage, whereas that of the non-migrants is well below their wage.

74. X. Meng & J. Zhang, "The Two-Tier Labor Market in Urban China: Occupational Segregation and Wage Differentials between Urban Residents and Rural Migrants in Shanghai", 29 *Journal of Comparative Economics* 2001, pp. 485-504.

75. Their estimates show that if rural migrants had been treated just as their urban counterparts were, about 6% more migrants, who are currently holding blue-collar jobs, would have obtained white-collar jobs. If urban residents were treated as their migrant counterparts were, 22% of those who are currently employed as white-collar workers would have been in blue-collar jobs. In addition, the average hourly earnings of rural migrants are 48% of those of urban residents. However, if the two groups had been treated equally, rural migrants would have earned 10.6% more, on average, than their urban counterparts.

76. A. Park & D. Wang, "Migration and Urban Poverty and Inequality in China", 3 *China Economic Journal* 1, 2010, pp. 49-67.

77. According to the 2005 China Urban Labor Survey in twelve cities, coverage rates for migrants was 8.3% for pensions, 6.8% for medical insurance, and 4.4% for unemployment insurance, compared with 61.7, 52.3, and 18.8% for local residents (World Bank, *China: From Poor Areas to Poor People: China's Evolving Poverty Reduction Agenda - An Assessment of Poverty and Inequality in China*, World Bank, Washington, D.C. 2009, p. 184).

78. According to the China Urban Labor Survey of four large cities in 2005, 70% of migrants with children in school reported facing higher schooling costs because they lacked a local hukou; they estimated that the costs of schooling would fall by 35% if they had a local hukou (World Bank 2009, p. 182).

79. D. Fu Keung Wong, C. Ying Li & H. Xue Song, "Rural Migrant Workers in Urban China: Living a Marginalized Life", 16 *International Journal of Social Welfare* 2007, pp. 32-40.

80. D.J. Solinger, "The Creation of a New Underclass in China and Its Implications", 18 *Environment and Urbanization* 2006, pp. 177-193.

81. F. Chen, "Individual Rights and Collective Rights: Labor's Predicament in China", 40 *Communist and Post-Communist Studies* 2007, pp. 59-79.

82. See, for example, Brown (*Understanding Labor and Employment Law in China*, Cambridge University Press, New York 2010, p. 9) who cites a government survey showing that 72% of China's millions of migrant workers were owed back pay in 2003.

taking is in the public interest and that those who have been adversely affected by the land-taking should receive just compensation, collective land cannot be sold, transferred, or leased for non-agricultural construction, such as industrial development. The land-taking system, however, has been systematically manipulated by regional governments to procure low-cost land at the expense of farmers' land rights.

There are some legal loopholes⁸³ that local governments use to finance development by land-taking. First, the definition of public interest is vague, and a large amount of rural land is taken by governments for purely private or commercial purposes. For example, in a survey conducted in 2008 that covers 1,773 rural households in 1,657 villages of the seventeen major agricultural provinces, Prosterman *et al.*⁸⁴ show that 40% of the seizures can hardly be categorized as in the public interest (12.9% was for developmental zones or industrial parks, 9.1% for factories, 6.4% for urban housing, 0.9% for gas stations, and 10.7% for other uses). Second, because rural collectives (mainly villages) are not democratically organized, the average farmer, who typically knows little about his legal rights and seldom has access to independent courts for an unbiased ruling, will be at the mercy of a few villages officials.⁸⁵ These officials, however, sometimes collude with local governments and developers to extract as much rent as possible from farmers' land. Finally, compensation for the farmers' lost land is often grossly inadequate.⁸⁶ The 1998 Land Management Law sets up a specific formula to determine the amount of compensation, which is far from adequate because the formula does not consider the fair-market value of the land or the full range of the negative impact on the farmers. In other words, the law does not allow farmers to profit from the appreciation of land value due to urbanization and economic development. As many studies make clear, land-losing farmers typically receive only

10–20% of the market value of the land. In some extreme cases, the amounts of compensation were only 16–21 CNY per mu (1/15 hectare).

Land confiscation by local governments for non-agricultural purposes has resulted in serious economic and social problems in recent years. Nearly 34 million mu of farmland were converted to urban and industrial development from 1987 to 2001, and about thirty-four million farmers lost land.⁸⁷ As the Ministry of Land and Resources admits, China's cultivated land has therefore dwindled, leading to a serious contradiction between land and population. In addition, the farmers who are deprived of their land often do not have a viable alternative livelihood and therefore are more likely to organize and confront the authorities. Actually, there is an increase in the number of incidents of rural unrest, including violent confrontations between local governments and farmers.^{88,89} Finally, land becomes an important source of local revenue, or more precisely, the main source of extra-budgetary revenues. Without an effective monitoring and control system, extra-budgetary revenues have softened the budget constraints for all levels of government, allowing governments to maintain both bloated workforces and excessive spending.⁹⁰

While Chinese industry has indeed helped lift tens of millions of people out of poverty, it is also blamed for bringing about serious environmental damage.⁹¹ As a response to the increasing number of environmental problems, SEPA was established in 1998, and environmental laws and regulations began to appear after its establishment. The main regulatory framework to date is command and control, with SEPA issuing regulations, sending inspectors to check on compliance, and imposing fines for violations.⁹² These regulations include discharge limits based on both total emissions and ambient concentrations of emissions. New manufacturing enterprises are required to receive certification before production can begin, and time limits are set for compliance on the part of existing enterprises.

The effective implementation of environmental laws and regulations is in large part the responsibility of local SEPA branches, given the decentralized nature of China's environmental protection system. For their fund-

83. P. Ho, *Institutions in Transition: Land Ownership, Property Rights, and Social Conflict in China*, Oxford University Press, New York 2005 argues that these loopholes, or ambiguities, are intentionally built into the law to give the central leadership leeway for responding to societal development and can therefore be defined as "intentional institutional ambiguity".

84. R. Prosterman, K. Zhu, J. Ye, J. Riedinger, P. Li & V. Yadav, "Secure Land Rights as a Foundation for Broad-Based Rural Development in China: Results and Recommendations from a Seventeen-Province Survey", *National Bureau of Asian Research Special Report* 18, 2009.

85. Zhang ("Asymmetric Property Rights in China's Economic Growth", 33 *William Mitchell Law Review* 2007, pp. 567-589) shows that, to a large extent, farmers do not have much voice in the land procurement process. They are rarely informed of the purpose of land procurement or the terms of compensation until the arrangements are finalized and officially announced. Based on a seventeen-province survey conducted in 2005, K. Zhu, R. Prosterman, J. Ye, P. Li, J. Riedinger & Y. Ouyang, "The Rural Land Question in China: Analysis and Recommendations Based on a Seventeen-Province Survey", 38 *New York University Journal of International Law and Politics* 2006, pp. 761-839 report that approximately 30% (29.4%) of affected farmers were not notified of the land-taking in advance. On the amount of compensation, arguably the most pivotal issue, only one out of every five farmers (21.8%) was consulted.

86. K. Zhu & R. Prosterman, "Securing Land Rights for Chinese Farmers: A Leap Forward for Stability and Growth", Center for Global Liberty & Prosperity, *Development Policy Analysis* No. 3, 2007.

87. Zhang 2007.

88. In the first nine months of 2006, China reported a total of 17,900 cases of "massive rural incidents" in which a total of 385,000 farmers protested against the government. Approximately 80% of these incidents were related to illegal land-taking.

89. Zhu & Prosterman 2007.

90. C.P.W. Wong & R.M. Bird, "China's Fiscal System: A Work in Progress", in Loren Brandt and Thomas G. Rawski (eds.), *China's Great Economic Transformation*, Cambridge University Press, New York 2008.

91. China's State Environmental Protection Administration (SEPA) estimates that in 1995 industrial pollution accounts for over 70% of the national total, including 70% of organic water pollution (COD, or chemical oxygen demand), 72% of SO₂ emissions, and 75% of the flue dust (a major component of suspended particulates) (H. Wang & D. Wheeler, "Pricing Industrial Pollution in China: An Econometric Analysis of the Levy System", *World Bank Policy Research Working Paper* 1644, 1996).

92. J. Roumasset, K. Burnett & H. Wang, "Environmental Resources and Economic Growth", in L. Brandt and T.G. Rawski (eds.), *China's Great Economic Transformation*, Cambridge University Press, New York 2008.

ing, local SEPA branches depend on local governments, which also approve promotions and allocate resources and personnel. This dependence leaves local SEPA branches financially vulnerable and under intense pressure from growth-driven local officials.⁹³ Enforcement is therefore inconsistent across regions and firms.⁹⁴ What is even worse, lax enforcement has been the rule rather than the exception. For example, central government inspections in October 2006 revealed that local governments had checked just 30% of the projects for compliance with environmental regulations before approval, and nearly half of the projects checked did not implement the required pollution controls.⁹⁵ In some extreme cases, local officials prevent inspectors from completing their work or pay them to overlook violations, or evade orders to close down polluting plants.⁹⁶ When, for example, the three-year “zero-hour operation” to clean up the Huai river targeted small factories along the river beginning in 1998, local officials sought to keep plants running by amalgamating small mills into larger units or by stopping daytime production but operating the plants at night.

Chinese prices for energy commodities, such as oil, natural gas, and electricity, are still controlled or directly set by the state. The domestic price set by the government, according to Yusuf and Nabeshima,⁹⁷ is a mix of world market prices, a domestic shadow price of production, and markup for distribution. The resulting prices are lower than those of China’s comparators. For example, at the end of April 2008, Chinese gasoline and diesel prices were 20 and 40% lower than those in the United States, the country with the lowest fuel prices in the industrial world.⁹⁸ Low energy prices make it difficult to recover the opportunity cost of resource depletion as well as the cost of environmental damage⁹⁹ in

both production and consumption. In addition, fuel taxation in China is very low compared with other industrial countries (especially Japan and the Republic of Korea) that are large net oil importers; indeed, it appears to be close to zero on a net basis.¹⁰⁰

In general, a report issued by the World Bank concludes that “energy consumption is increasingly conditioned by very decentralized economic and lifestyle choices, while policy is still mostly based on command and control. The reform of energy markets and pricing has stalled. Prices of energy commodities are sending the wrong signals to consumers because they do not include the social costs of environmental externalities and because they favor increased supply over efficient-use measures”.¹⁰¹ Inefficient pricing of energy resources tends to artificially increase energy consumption, raise investment returns in manufacturing, particularly the most energy-intensive industries, and hence lead to overinvestment in heavy industry.¹⁰²

A series of studies conducted by Huang and his colleagues provide some crude estimates of factor market distortions in China. For example, Huang (2010) shows that total cost distortions, including labor market distortion (CNY 411 billion), capital market distortion (CNY 607 billion), land market distortion (CNY 120 billion), energy price distortion (CNY 204 billion), and environment cost distortion (CNY 591 billion), amounted to CNY 2,138 billion in 2008, or 7.2% of GDP. The estimated percentages obtained by Huang and Tao, which extend the period to include the nine years from 2000 to 2008, are summarized in Table 1. While the estimates vary from year to year, the findings are clear: producers in China receive significant subsidies from the rest of the economy, ranging from 8.1% of GDP to 12.2% of GDP.

5. Concluding Remarks

China has been the fastest-growing economy in the world for over three decades, expanding at 10% a year in real terms. As a result, it has surpassed Japan as the world’s second-largest economy, becoming a global economic superpower. Worries about the sustainability of China’s growth, however, have not been relieved by such an impressive economic performance; they have even increased in recent years. Both scholars and politicians warn that due to its unbalanced economic struc-

93. Bergsten *et al.* 2008, p. 79.

94. Wang & Wheeler (1996) show the effective implementation of the pollution levy at the provincial level to be a function of provincial income and education: the higher the level of income and education, the higher the effective levy. H. Wang, N. Mamingi, B. Laplante & S. Dasgupta, “Incomplete Enforcement of Pollution Regulation: Bargaining Power of Chinese Factories”, 24 *Environmental and Resource Economics* 2003, pp. 245-262 analyze the determinants of the relative bargaining power that firms may have in their relationship with local environmental authorities pertaining to the enforcement of the pollution levy, and they report that: (1) firms from the private sector appear to have less bargaining power than state-owned enterprises; (2) firms facing an adverse financial situation have more bargaining power and are more likely to pay fewer pollution levies than what they should be paying; (3) the higher the social impact of a firm’s emissions (as measured by the presence and number of complaints), the smaller the bargaining power the firms have with local environmental authorities.

95. Bergsten *et al.* 2008, p. 80.

96. Roumasset, Burnett & Wang 2008.

97. Yusuf & Nabeshima 2006, p. 102.

98. Bergsten *et al.* 2008, p. 146.

99. Bergsten *et al.* 2008, p. 146 claim that energy prices in China have not historically reflected environmental costs. For example, over 80% of the country’s electricity is generated from coal. At the end of 2006, less than 15% of coal power plants had flue gas desulphurization (FGD) systems installed (which are used to remove SO₂ from emissions streams) and even fewer had them running. If all the power plants in China installed and operated FGD systems, average electricity tariffs could rise by 10-20%.

100. N. Berrah, F. Feng, R. Priddle & L. Wang, *Sustainable Energy in China: The Closing Window of Opportunity*, World Bank, Washington, D.C. 2007, p. 137.

101. Berrah *et al.* 2007, Executive Summary.

102. Myers and Kent (*Perverse Subsidies: How Tax Dollars Can Undercut the Environment and the Economy*, Island Press, Washington, D.C. 2001, p. 76) estimate that China’s energy subsidies in 1998 pushed prices to 11% below world market levels; in that year, the cost of reduced efficiency amounted to \$4 billion. If the government were to eliminate energy subsidies entirely, this would reduce energy consumption by 9% and cut carbon dioxide emissions by 13%.

Table 1. Estimated Factor Market Distortions in China, 2000–2008 (% GDP)

	Labor	Capital	Land	Energy	Environment	Total
2000	0.1	4.1	0.5	0.0	3.8	8.5
2001	0.2	3.9	0.5	0.0	3.5	8.1
2002	0.8	3.9	0.4	0.0	3.3	8.4
2003	1.0	3.8	1.1	0.0	3.3	9.2
2004	2.0	3.1	0.9	0.6	3.0	9.5
2005	2.4	3.0	1.3	1.7	3.0	11.4
2006	2.7	3.1	2.0	1.6	2.8	12.2
2007	3.2	3.6	1.2	1.6	2.4	12.0
2008	3.6	3.4	1.0	0.7	1.9	10.6

Source: Y. Huang & K. Tao, "Factor Market Distortion and the Current Account Surplus in China", 9 *Asian Economic Papers* 3, 2010, pp. 1-36.

ture and resultant economic and social problems, such as inefficient resource use, unequal income distribution, serious pollution, China's economy is not sustainable, and there is a high probability of a hard landing or even an economic crisis in the near future. China is arguably approaching a turning point in its economic development.

It is fair to say that China's top leadership has already realized the necessity and urgency of a transition from an investment-driven growth pattern to a growth path that relies more on expanding domestic consumption. In the past seven years, Premier Wen and his government have adopted a wide range of policy measures, including administrative controls, monetary instruments, and fiscal tools, to adjust China's economic structure.¹⁰³ For example, the government has provided large subsidies to agriculture to boost rural income, and it has tightened controls over investment projects to reduce overcapacity in certain industries. It has adjusted export tax rebates and revalued the currency in order to slow export growth and narrow current account surpluses. It has required all of the provinces to lower the energy intensity of GDP by 20% during the eleventh Five-Year Plan in order to improve energy efficiency and curb pollution. The government has even adopted a new strategy to respond to global climate change.

Rebalancing the sources of economic growth, however, has proven to be a much greater challenge than expected. The policy efforts have failed to reverse the overall trend of a worsening economic structure, and China's economic growth has become even more imbalanced since 2003. The most important reason, we believe, lies in the fact that most of the policy measures implemented so far have not been directed towards the laws and

regulations that cause serious distortions in factor markets, such as interest rate controls, the hukou system, and the land-taking system. Without a systematic legal and institutional reform aimed at liberalizing factor markets and, hence, leaving the prices of factors to be set in accordance with relative scarcities and social preferences, China's unbalanced economy can hardly be corrected, and China may be stuck in the so-called "middle income trap" in the long term, as warned by the president of the World Bank, Robert Zoellick.

It is hard to predict whether such a systematic reform will be adopted and implemented before the opportunity window closes. On the one hand, as Huang states, history has shown that Chinese policymakers can act decisively when they face crises. For example, confronting the significant risk of a reversal of the reform process, Deng Xiaoping took a famous "Southern Tour" and reemphasized the need for accelerated economic reform in 1992. His interventions reignited economic reform and finally led to an official endorsement of "socialist market economy" in the 14th Congress of the Communist Party. On the other hand, as Pei¹⁰⁴ argues, China's gradualist reform strategy allows the ruling elites to protect their rents in vital sectors (such as factor markets) and use retained rents to maintain political support among key constituencies. Any further reform that may reduce economic distortion (and hence economic rents) will therefore undermine the regime's survival and risk being resisted or sabotaged by the ruling elites. In other words, a rebalancing strategy is economically efficient but politically infeasible.

Political reform, a precondition for further economic reform, especially factor market liberalization, therefore becomes a task that can no longer be bypassed by the Chinese Communist Party (CCP), which has intentionally neglected it since 1989. In recent years, there have

103. Y. Huang & B. Wang, "Rebalancing China's Economic Structure", in R. Garnaut, J. Golley & L. Song (eds.), *China: The Next Twenty Years of Reform and Development*, Australian National University E Press, Canberra 2010.

104. M. Pei, *China's Trapped Transition: The Limits of Developmental Autocracy*, Harvard University Press, Cambridge, MA 2006.

been numerous warnings about the danger of stagnation in political reform. For example, Pei¹⁰⁵ claims that “gradualism in economic reform may be more likely to fail when it is undertaken without accompanying reforms that restructure the key political institutions that define power relations and enforce the rules essential to the functioning of markets”. Yang Yao, a famous Chinese economist as well as an enthusiastic supporter of the CCP, recently admitted that “ultimately there is no alternative to greater democratization if the CCP wishes to encourage economic growth and maintain social stability”.¹⁰⁶ A political transition to a more democratic regime is undoubtedly desirable, in view of its role in contributing to China’s long-term economic prosperity and social welfare by transforming the government from a “grabbing hand” to a “helping hand”, from a market participant to a market regulator and public goods provider, and from a patron of special interest groups to a guard of public interests. However, as Naughton¹⁰⁷ has cautioned, given China’s weakly institutionalized political system and a highly contingent and perhaps precarious set of circumstances, only time will tell whether such a political transition will happen in the future, and if it happens, in what form and at what cost.

105. Pei 2006, p. 24.

106. Y. Yao, “The End of Beijing Consensus”, *Foreign Affairs* 2010, <www.foreignaffairs.com/articles/65947/the-end-of-the-beijing-consensus>.

107. B. Naughton, “A Political Economy of China’s Economic Transition”, in Loren Brandt & Thomas G. Rawski (eds.), *China’s Great Economic Transformation*, Cambridge University Press, New York 2008.