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THE ECONOMICS OF CHINA: Successes and Challenges

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The Economics of China: Successes and Challenges[*]

By

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[*] Introduction to the Oxford Companion to the Economics of China, Oxford University Press, forthcoming.

Abstract

This paper introduces the Oxford Companion to the Economics of China, a new collection of perspectives on the Chinese economy's past, present and future. he contributors of these entries include: the best of young Chinese researchers based in China and outside; renowned academics from the top universities in China, Europe and North America; present and past senior officials of international agencies like the World Bank and the International Monetary Fund; senior Chinese government officials from the Centre and the Provinces; and four recipients of the Nobel Prize in Economics. This introduction does not summarize or synthesize the entries in the Companion. Rather, we provide our own perspectives on the Economics of China—the past experience and the future prospects. Our reading of China's economic development over the past 35 years raises two major sets of issues, one of which is inward looking, and the other of which is outward looking. While Chinese aggregate development is impressive, it has raised the question of whether the growth is sustainable, and has led to a set of distributional issues and well-being concerns. We argue that these internal issues combine with those raised by China's rapid integration and ever growing presence in the international arena, to jointly frame the challenges faced by China in the next 35 years, as it approaches the 100th anniversary of the People's Republic in 2049.

1. Introduction

"Even if it is a fading symbol of Chinese society, the bicycle remains a tempting metaphor for its economy. Bikes—especially when fully laden—are stable only so long as they keep moving. The same is sometimes said about China's economy. If it loses momentum, it will crash. And since growth is the only source of legitimacy for the ruling party, the economy would not be the only thing to wobble." The Economist, May 26, 2012; Special Report: China's Economy.

It is now the fourth decade since the start of China's economic reforms launched the country on perhaps the most spectacular growth and poverty reduction performance in the history of the world. This achievement has been accompanied by equally dramatic outcomes in other economic spheres. There has been growth in exports, infrastructure, reserves, foreign direct investment and development assistance. But, at the same time, there has been growth in inequality, spatial divergence, corruption, an underclass of migrant workers, environmental pollution and carbon emissions. These twin dimensions frame the economics of China as it looks ahead to the next four decades, approaching the 100th anniversary of the People's Republic in 2049.

This paper introduces the Oxford Companion to the Economics of China; a new collection of perspectives on the Chinese economy's past, present and future. The entries are brief but wide ranging, covering China's aggregate performance, the main sectoral trends, issues of inequality in its many dimensions, and China's role in the world economy. The contributors of these entries include: the best of young Chinese researchers based in China and outside; renowned academics from the top universities in China, Europe and North America; present and past senior officials of international agencies like the World Bank and the International Monetary Fund; senior Chinese government officials from the Centre and the Provinces; and four recipients of the Nobel Prize in Economics. Other than the requirement that the entry be analytical and not polemical, the contributors were given freedom to put forward their particular perspective on a topic. The entries are not therefore surveys of the literature. Rather, they constitute a picture of the concerns of modern economics as it is applied to China's problems, as seen by the leading economists working on China.

This introduction cannot, should not, and does not summarize or synthesize the entries in the Companion. Rather, in what follows we provide our own perspectives on the Economics of China—the past experience and the future prospects. While the entries in the Companion provide some of the input to our discussion, we rely also on the broader literature on Chinese economic development. Section 2 of the paper begins the exercise (2.1) with an account of how the broad aggregates of the Chinese economy have moved in the last 35 years, setting out the remarkable acceleration in growth and trade that the reform process unleashed. The section then moves on to a more sectoral perspective (2.2) on these developments, looking at movements in agriculture and industry in particular. Finally, based on this aggregate picture, Section 2.3 highlights emerging issues for the future.

Our reading of China's economic development raises two major sets of issues, one of which is inward looking, and the other of which is outward looking. While Chinese aggregate

development is impressive, and has led to dramatic poverty reduction, it has also led to a set of issues which Section 3 discusses under the heading of "Domestic Challenges." Section 3.1 takes up the sharp rise in interpersonal inequality in China, and its many dimensions, such as the growing underclass in urban areas. Section 3.2 takes a different cut at the inequality question by considering some non-income dimensions of well-being. Section 3.3 specifically addresses an important aspect of non-income wellbeing, environmental sustainability. Section 4.4 focuses on the spatial dimension of inequality, which has been an important one in China historically.

The outward oriented set of issues are considered in Section 4, under the heading "China and the World." Section 4.1 addresses the past, present and future of China's integration into the global economy, looking at trade, investment and financial flows. Section 4.2 assesses specifically China's engagement with the developing world through aid, investment and trade. Section 4.3 turns attention to China's role in global agencies such as the World Bank and the International Monetary Fund, and more generally in creating global public goods and addressing global externalities such as carbon emissions and financial contagion.

Section 5 pulls together the threads by providing a perspective on how the experiences and lesson of the past thirty five years frame the challenges faced by China in the coming thirty five years to 2049.

2. Chinese Performance and The China Model

2.1 Growth and Poverty Reduction

Since the late 1970s, China has grown at an average annual rate of around 10 percent for more than three decades. Starting from being a poor and insular nation, it has become the second largest economy, the largest trading nation and the most popular destination of foreign direct investment in the world. Many economists are optimistic about China's growth potential (Lin; Fogel and Grotte, *entry in this volume*). China is set to surpass the U.S. as the leading economy in a decade.

The Chinese growth miracle started with agriculture in the late 1970s. The essence of the reform was decollectivization of agricultural production and land user rights. The most important part of the reform was officially called the household responsibility system (HRS). HRS granted farmers land cultivation rights and empowered them to make their own production decisions. With better aligned incentives, agricultural production and rural incomes witnessed a dramatic increase in the ensuing years. During the first period of HRS implementation between 1978 and 1984, output in the Chinese agricultural sector increased by more than 61% and HRS accounted for 49% of the output growth (Lin, 1992). In a few years, hundreds of millions of farmers were released from their land, providing the nonfarm sector with a seemingly unlimited labor supply.

In the mid-1980s, township and village-owned enterprises (TVEs) took off under the dual-track reform. Concerned about the potential catastrophic consequence of fully liberalizing prices and privatizing the state-owned enterprises (SOEs) at once, China adopted a gradual and

pragmatic approach by allowing the TVEs to operate at the margin. Because TVEs were largely labor intensive in line with China's comparative advantage at the time, they immediately blossomed once allowed to access quotas of raw materials unused by SOEs. The TVE sector outpaced the state sector in both growth rate and productivity. As a result of the TVE sector's fast growth, the non-state sector's share of industrial output increased from 22% in 1978 to 47% in 1991, while the state sector's share declined from 78% to 53% in the same period (Qian and Xu 1993). TVE development peaked in the mid-1990s. Employment in the TVE sector increased from 30 million in 1980 to 129 million in 1995. TVEs' share of gross domestic product (GDP) rose from 14.3% in 1980 to 37.5% in 1995.

The reform of industrial sectors in the urban area started in earnest only in the late 1980s, and was pursued along two dimensions. On the one hand, entry barriers in most sectors were reduced substantially so that many de novo private firms were born although many were often nominally associated with local government ownership. On the other hand, the reform of existing state-owned enterprises (SOEs) was executed by following a strategy of "grasping the big, and letting go of the small." That is, while a small number of very large firms in what the government considered "strategic sectors" were kept in majority state ownership, a large number of small and medium sized enterprises were privatized or at least their ownership was transferred from the central government to local governments.

By the mid-1990s, the private sector also witnessed dramatic growth. Seeing the dynamics of the private sector, the government started to reform TVEs and SOEs. By the late 1990s and early 2000s, most TVEs and SOEs had been privatized. Accordingly, TVE employment plummeted from 129 million in 1995 to merely 6 million in 2011, while SOE employment shrunk from 113 million in 1995 to 67 million in 2011. In the short term, the reform was a painful process; millions of urban workers were retrenched. Eventually, most of the lost jobs in TVEs and SOEs were picked up by the dynamic private sector. By 2011, 193 million people worked in private enterprises or were self-employed, about three times the workforce of SOEs (CNBS, 2012).

China's economic growth was not even across space. In order to better utilize China's comparative advantage of cheap labor in the international market, China adopted an export-oriented development strategy. It set up numerous special zones in the coastal provinces to attract foreign direct investment (FDI). From 1978 to the mid-2000s, the coastal areas attracted most of FDIs and created millions of jobs. China's entry to the World Trade Organization (WTO) further increased the trend to global integration. As the coastal provinces became a growth pole, workers from interior regions migrated there to seek better-paid jobs. The total number of migrants increased by nearly fivefold from merely 25 million in 1990 to 145 million in 2009 (CNBS, 2010; Meng).

For nearly two decades, it seemed that China had inexhaustible surplus labor. But signs of labor shortage started to emerge in the mid-2000s. Since 2004, wages for unskilled workers have had double digit growth rates, indicating China perhaps has passed the Lewis turning point, from which the era of surplus labor is over (Zhang et al., 2011). Because remittances from migrant workers accounted for a large share of rural income, rising wages for unskilled labor

boosted rural income. In the past several years, rural income growth overtook their urban counterparts after lagging behind for two decades.

The trend of poverty reduction mirrored China's growth patterns. The rapid economic growth contributed to a massive poverty reduction. Since the late 1970s, more than six hundred million Chinese have escaped from poverty (Ravallion and Chen, 2007; Park and Wang). At the onset of economic reform in the late 1970s, more than half of the population lived under the international "$ 1 per day" poverty line. By 2010, the poverty incidence had dropped to about 10%. There is no doubt that both the scale and speed of poverty reduction in China are unparalleled in human history.

However, the progress against poverty has been uneven over time and across space. Most of the drop in poverty happened in the early 1980s when the HRS reform took place. Consequently, the rural poverty rate dropped sharply from 76% in 1980 to 24% in 1986 based on the international poverty line of 1$ per day (Ravallion and Chen, 2007). In other words, more than 400 million people moved out of poverty in a short, six-year spell. Agricultural growth played a key role in China's massive poverty reduction. Afterwards, however, the pace of poverty reduction stalled in the 1990s and early 2000s during the period of SOE reform. Urban poverty emerged as a problem (Fang et al., 2002; Appleton et al., 2013). In the past decade, thanks to rising wages and the introduction of social safety net programs, poverty rate showed a steady decline (Park and Wang). Yet, there are still pockets of poverty, mainly concentrated in the western region.

Accompanied by economic growth, many social indicators have also improved as well. According to China Population Census in 1981 and 2010, the infant mortality rate dropped from 39.1‰ to 13.1‰ from 1981 to 2010, while the illiteracy rate declined from 34.8% to 4.9%. Life expectancy in China witnessed a remarkable improvement from as low as 35 years old in 1949, to 68 years old in 1981 and 75 years old in 2010. Chinese life expectancy was more than eight years longer than that of Russians and only four years below that in the United States. Given China's per capita GDP accounts for only one-fifth of that in the United States, China's record in improving life expectancy is truly remarkable.

2.2 Structural Transformation

China's remarkable path of development since the late 1970s is marked by a significant transformation of its economic and demographic structure. This process involves a shift from a predominantly agricultural and rural economy to an urban-based, industrialized one. A corresponding change in the demographic structure has also taken place as a more urban population is increasingly employed in services and industry.

During the last thirty-five years, growth in China's agricultural sector has hovered around four percent per year, whereas the services and industrial sectors in China grew much faster (2-5 times) than agriculture. An extensive body of literature has attributed this rapid growth to a combination of factors, including improved sectoral productivity and increased input use. Increased productivity growth in both agriculture and nonagriculture has been associated with a

decline in the agriculture's share of economic activity as resources, such as labor and capital, are reallocated to higher-productivity sectors (Dekle and Vandenbroucke 2012).

The center of gravity of the Chinese economy has rapidly shifted away from agriculture toward industry and services. In the 1960s, agriculture contributed approximately 40 percent of GDP, but by 2011 agriculture's share of GDP had fallen to 10 percent. During this time, industry has steadily continued to contribute almost half of GDP, and the services sector has doubled its share of GDP from 20 percent in 1980 to 40 percent in 2011. However, in terms of shares, the services sector in China remains far smaller than in other emerging economies such as Brazil, India, and South Africa, where services contribute 67, 55, and 67 percent of GDP. In fact, the size of China's services sector in relation to other sectors is on par with poorer economies such as Cambodia, Vietnam, and Ethiopia although China's rather low share may reflect a strong performance in the industrial sector.

Structural changes across sectors have been accompanied by significant restructuring within China's agricultural sector. What was once an overwhelmingly grain-focused sector has steadily been moving toward one that increasingly includes higher-valued cash crops (such as oil seeds, fruits, and vegetables), livestock, and aquaculture products. During the last several decades, the production of these high-value agricultural products recorded growth rates that often exceeded those of staple crops such as rice and wheat. In fact, the share of agricultural output value coming from crops decreased from 82 percent in 1970 to 55 per cent in 2010, compared to an increase from 2 to 11 percent by fisheries and 14 to 31 percent by livestock. This structural transformation can also be seen with crops as the share of land allocated to staple crops such as rice and wheat has decreased while increasing for cash crops such as vegetables.

Similar structural changes occurred in manufacturing and service sectors. As described by Yu (2012) (http://mjyu.ccer.edu.cn/Yu_UNIDO.pdf), China's manufacturing sector experienced rapid structural shifts in four phases. From 1978 to 1985, China was still a resource based economy, producing and exporting resource-based goods, such as coal, oil and gasoline. During 1986-1995, China witnessed a fast growth of labor-intensive exports. From 1996 to 2000, the main export from China was electrical machinery and transport equipment. During the last decade, China has recorded a fast export growth in high-technology products, such as life-science equipment, electronic and IT products. The service sector has also been transformed from small informal service activities on the one hand and state owned trading, marketing and education/health services to a dynamic, more informal and private owned sector (Zhang and Evenett, 2010: http://www.iisd.org/pdf/2010/sts_4_growth_china_services_sector.pdf).

Structural changes can also be observed in employment patterns. In 1980, agriculture was a major employer, with 70 percent of the country's workforce engaged in agricultural activities. A much smaller percentage of the workforce was employed in the industry and service sectors, 18 and 13 percent respectively. By 2010, the employment landscape has also experienced a large scale movement from agriculture to industry and services. Agriculture still employs the largest share of the workforce but the percentage has declined to 38 percent. In contrast, employment in industry and services has been on the rise, increasing to 29 and 35 percent of the workforce. As workers exit agriculture and migrate to urban centers for employment in industry and services, China's population is becoming more urban. The share of

the population living in urban areas has risen from 19 to 50 percent between 1980 and 2011, and forecasts indicate that approximately 77 percent of the population will live in urban areas by 2050. Indeed, the number of people living in rural areas has fallen since the early 1990s at an increasingly higher rate and this trend is projected to continue in the future.

As labor becomes more expensive and moves out of agriculture in China, a mechanization revolution within the agricultural sector is taking place with the emergence of private mechanized service providers. Numbering in the tens of thousands, these farmer companies are fulfilling the country's need to replace increasingly expensive labor with machinery by travelling year-round across provinces to provide farmers with land preparation and harvesting services at a competitive price (Yang et al 2013). Rice production in China, for example, is modernizing across the entire value chain. In addition to the doubling of farm equipment holdings in China between 2004 and 2009, rice mills are consolidating and modernizing technologically and the rice value chain is becoming geographically longer but shorter in terms of participants (Reardon 2012).

2.3 The Chinese Economic Model

The successful expansion and development of the Chinese economy during the past several decades is undeniable. China's development trajectory has been guided by a series of gradual reforms that focused on transforming from central planning to a more market-based and equitable economy. This raises the question as to what extent China's experience can serve as a model that other developing countries can follow.

Model of economic development

Over the last three decades, the Chinese government has implemented a broad spectrum of economic reforms that were situated in a framework of transforming the economy from central planning to a more efficient, market-driven, and (more recently) equitable system. A significant common denominator across these reforms was the adoption of a gradual and progressive approach that was based on evidence from local experiments, often dubbed the "crossing the river by touching the stones," in key areas, such as trade, governance, and ownership structures.

Take the rural reform as an example. Initially, the decentralization of agricultural production and management systems happened in Xiaogang Village of Anhui Province. Later on, the government ran some pilots of the same kind of reform in remote areas (Du, 2010). Once evidence from these pilots showed that decollectivization successfully stimulated production incentives and encouraged more efficient resource allocation, the reforms were sanctioned by the central government and then scaled-up nationally. As a compliment to the change in the ownership structure, the central government also promoted village self-governance on an experimental basis, which allowed for the testing of procedures and logistics. What started as makeshift, locally-driven organizations in a few villages became a ten-year pilot scheme under the Draft Organic Law of Village Committees, followed by a nationwide roll-out of village elections (O'Brian and Li 2000; Qian).

The opening of China's economy to foreign trade was also implemented through a gradual, experimental approach that saw the establishment of Special Economic Zones (SEZs) in a handful of provinces. Characterized by preferential policies (such as lower tax rates) and institutional autonomy, the SEZs were established to stimulate joint ventures and foreign direct investment, serving as a springboard to increase China's exports and technology development (Lin and Wang 2009; Zeng 2010). The SEZs successfully tested a more liberalized economy in a few places before expanding the reforms to other areas in various forms, including high-tech and free trade zones.

These various pilots and experiments allowed the government to test heterogeneous structures that best suited China's unique economic and political characteristics. Such careful experimentation at the local level was essential for the successful design, sequencing, and implementation of reforms. It allowed for mid-course corrections and provided the time to build the necessary institutions, help stakeholders adjust to the new system, and secure political support (Bruce and Li 2009; Zhang, De Haan, and Fan 2010; Xing and Zhang, 2013).

Although the size and structure of China's economy and population differ in many respects from other developing countries, its pragmatic and gradual approach to economic reforms offers useful lessons. Rather than immediately implementing all reforms or unwaveringly following universal prescriptions under one "ideological" path, China's central government progressively introduced policies, building on previous reforms and continually capitalizing on China's changing comparative advantage. This approach allowed the Chinese central authorities to develop rather unorthodox policy measures that differed from those that would have been prescribed by outsiders (Rodrik 2005). A dual-track approach to many reforms enabled the government to integrate and smoothly transition between new and old policy initiatives—for example, providing necessary protection to nonviable firms in the priority sectors and, simultaneously, liberalizing labor-intensive sectors in which China had a comparative advantage. Good initial conditions in rural infrastructure, agricultural research and extension services, and capacity of institutions also played a key role. In addition, adjustments were made along the way to account for unanticipated developments, including the recent introduction of policies that focus on eliminating disparities between regions and population groups (Li, Chuliang, and Sicular 2013).

Looking ahead, the question for analysts and policy makers is how the China model will address a range of challenges that have emerged alongside the undoubted successes of the past thirty five years. We turn now to these domestic and international challenges.

3. Domestic Challenges

3.1 Income Inequality

During the planned economic era, China was one of the most egalitarian societies. In 1981, the Gini coefficient in rural and urban areas was low at 0.25 and 0.18, respectively (Ravallion and Chen, 2007). However, there was a large rural-urban gap because of the *Hukou* system put place in the late 1950s. Under the *Hukou* system, urban residents enjoyed the

privilege of guaranteed jobs and a cradle-to-grave social welfare system, but rural residents were confined to their birth places. In 1981, per capita urban income was about three times of rural income. As a result, the overall Gini coefficient (0.28) exceeded that of either urban or rural China, taken separately (Riskin, *entry in this volume*). Of course, the national income inequality even at 0.28 was low when compared to China's subsequent changes or to most other countries.

During the HRS reform period, rural income rose twice as fast as their urban counterparts. Consequently, the rural-urban gap narrowed, lowering the overall inequality. In 1988, the Gini coefficient fell to 0.21 (Knight, *entry in this volume*). However, since then unfavorable farm prices and the coastal development strategies have further widened the rural-urban gap. The national Gini rose to 0.45 in 2001 (Ravallion and Chen, 2007). Based on CHIP 2007, Li et al. (2013) estimated a national Gini of 0.47.

Estimates based on a few recent nationally representative surveys independently undertaken by Chinese universities suggest the income distribution problem is even more serious (Xie et. al., 2013). All the three surveys, the China Family Panel Studies (CFPS by Peking University, 2010 and 2012), the Chinese General Social Survey (CGSS, 2010) by Renmin University, and the Chinese Household Finance Survey (CHFS, 2011) by Southwestern University of Finance and Economics, report China's national Gini coefficient over 0.5 in 2010. Especially, the estimate based on CHFS reached 0.6, making China one of the most unequal societies in the world. It is widely speculated that the national surveys have seriously undercounted the high-income groups (Riskin; Wang and Wong, 2010). A recent study (Zhang et al., 2013) demonstrates that the official surveys may underestimate the number of poor as well — poverty prevalence at the national, rural, and urban levels based on the CFPS, CGSS and CHFS were much higher than official estimates and those based on the CHIP, a subsample of national surveys.

Not only has the overall income inequality worsened, so has inequality within urban and rural areas. According to an estimated based on CFPS, the rural and urban Gini coefficients were as high as 0.50 and 0.48 in 2010, reflecting a rapid escalation from low levels of within-group inequality in the 1980s (Zhang et al., 2013). The rapid increase in urban inequality was closely associated with the massive retrenchment of SOE workers in the 1990s. As most of the laid-off SOE workers were in their 40s or 50s, it was difficult for them to find jobs better-paid than previous ones. Meanwhile, the remaining urban workers could command higher wages because skill premiums have increased after China's opening up, in particular its accession to WTO in 2002 (Song, *entry in this volume*). In addition, there was a shift in government policy in favor of the state sector. In the past decades, those workers in SOEs enjoyed more lucrative pay than their counterparts in private enterprises owing to the increasing monopoly power of SOEs. All these factors contributed to the escalation of urban inequality.

Regarding rural inequality, nonfarm employment is a major contributing factor. The share of wage income inequality in overall rural income inequality rose from 21% in 1988 to 41% in 2007 (Knight, *entry in this volume*). Since wage income mainly came from local nonfarm jobs and remittance, the uneven distribution of nonfarm job opportunities across regions plays a significant part in explaining the rising rural inequality. The contribution of between-province

inequality to total rural inequality increased from 22% in 1988 to 39% in 2007 (Sicular et al., 2007).

As China enters the stage of development beyond the Lewis turning point where surplus labor is exhausted, in principle the market force of rising wages should place a downward pressure on national income inequality. Because the large share of wage income in total rural income, rising real wages could play an important role in narrowing the rural-urban gap and overall income inequality. Indeed, in the past several years, rural income grew faster than urban income. An estimate based on the second wave of CFPS reports that the national Gini dropped slightly from 0.51 in 2010 to 0.49 in 2012 (Xie et al., 2013). Although China's income inequality remains at a globally high level, at least the worsening trend seems to be subdued, if not reversed.

However, market forces alone may not be strong enough to reduce the high income inequality before government transfers. Various government policies can help speed up the process (Riskin, *entry in this volume*). For example, introducing more competition to the SOE sector could help dissipate their monopoly rents and cut their wage advantages relative to private firms, and elimination of the *Hukou* system will promote permanent migration and narrow the rural-urban income gap.

3.2 Non-income Dimensions

China's growth model is not a purely happy story. Despite the multiplication of real incomes in the past three decades, China's life satisfaction did not improve (Easterlin, *entry in this volume*). A large annual survey conducted by China's Central TV (Wei and Zhang, 2013) disclosed that the average happiness score has steadily declined from 2005 to 2011. How is it possible for Chinese people to feel more miserable amid the marked improvement in material living conditions? There are many potential explanations. Here we list a few.

First, happiness draws from relative comparisons. As income increases, people's aspiration primes to a new target. "Relative deprivation" is a widespread phenomenon (Chen, *entry in this volume*). For example, when seeing neighbors suddenly getting rich, one may feel relatively deprived and less happy even though his own income does not change at all. This example highlights that both relative income and chosen reference groups shape happiness. As a matter of fact, it is the local income inequality that matters more to happiness than national inequality (Knight, *entry in this volume*). Xing et al. (2011) found that within-village inequality increased from 0.44 in 2004 to 0.49 in 2006 in Guizhou. The rising inequality within a community negates the positive force of income growth on happiness.

Second, underlying reasons for inequality also matter to happiness. The large rural-urban gap in income and access to public service has been a defining feature of the contemporary Chinese economy, generating a major source of resentment for rural residents. Although during the reform period, health indicators have improved, their rural-urban gap has widened. For example, the ratio of infant mortality rate in rural areas relative to urban areas increased from 1.7 in 1981 to 2.8 in 2000 (Kanbur and Zhang, 2005). The uneven access to healthcare was the major cause. For instance, in cities, the out-of-pocket expense in total healthcare expense was

44% in cities and 87% in the countryside. The rural-urban gap in the number of hospital beds and healthcare professionals per 1,000 people has enlarged in the reform period. By 1998, the gap had increased to more than fivefold. In the past decade, China has introduced the new rural cooperative medical system intended to make healthcare more affordable for the rural poor. However, the findings on the impact of the program are mixed (Lei and Lin, 2009; Babiarz et al., 2010).

Thanks to the nine-year mandatory education law introduced in 1986, illiteracy rate has largely been eliminated in both rural and urban areas (Li, *entry in this volume*). However, the access to higher education has widened. In the late 1970s, most of the college students came from rural areas. However, the share of rural student dropped to only 10% in elite universities in recent years (Cai, *entry in this volume*). There is an emerging trend that many rich families send their children abroad for college, even high school education. The number of studying abroad has increased at an annual rate of 25% in the past decade (Li, *entry in this volume*). Of course, the share of studying abroad among rural families was much lower than their urban counterparts. The recent rising real wages for unskilled labors in combination with high college tuitions induce many rural kids to drop out schools at early age and migrate to cities to work (Rozelle et al., 2013). In the short run, such a decision may seem to be sensible. But in the long run, as China develops, the demand for skilled jobs will eventually exceed that for unskilled labors. Many of the current unskilled jobs will disappear, making many of the currently unskilled workers unemployable and trapping them in poverty. The widening gap in education between rural and urban areas will impede social mobility and enlarge income inequality, greatly increasing China's odds of falling into middle-income trap.

3.3 Environmental Sustainability

Some undesirable outcomes of growth negatively affect people's life satisfaction. Environment problems and food safety are now among the top concerns of urban residents. The heavy smog in Beijing in early 2013 highlighted the seriousness of the problem. The pollution index in Beijing exceeded the safety threshold for 19 days out of 31 days (Washington Post, 2013). Two Chinese cities command the top spots in the lists of the world's ten most polluted places.[1] Air pollution has become a national problem. A recent report released by China's Ministry of Environmental Protection (MEP) found that only 17 out of 113 major cities in China met air quality standards in 2012.[2] It has been widely documented in the public health literature that air pollution significantly increases the risks of respiratory diseases (Almond, *entry in this volume*). When people are confined in their apartments for fear of polluted air, they would definitely air more complaints.

Water pollution is also a serious problem. The MEP report revealed that 57.3% of ground water in 198 cities was "bad" or "seriously bad" and about 1/3 of national major rivers were deemed "polluted" or "seriously polluted." 1,000 out of 4,000 water treatment plans did

[1] http://www.time.com/time/specials/2007/completelist/0,29569,1661031,00.html.
[2] http://www.guardian.co.uk/environment/chinas-choice/2013/jun/07/chinas-environmental-problems-grim-ministry-report.

not meet the national standards (Economist, 2013).[3] Not surprisingly, pollution has replaced land disputes as the leading cause of social unrest in China.

As China became the "world factory," it also earned the title of the largest carbon dioxide emitter in the world, accounting for 29% of world emissions in 2011. China contributed to a large share of the incremental increase in CO2 emissions. Given China's reliance on export-oriented development strategy, it would be a great challenge for China to reduce CO2 emissions without compromising its growth.

Contaminated water and soil due to industrial pollution and overuse of fertilizer and pesticide also lead to food safety problem. According to a recent report, more than 44% of the rice in Guizhou Province contained cadmium exceeding the national standards.[4] In addition, as the food supply chain extends longer, the chance of fraud and deception in food processing increases. There have been numerous media reports on food safety problems, such as the deadly baby formula sandal and thousands of dead.[5] The concerns for food safety would of course comprise part of general concerns on life quality.

3.4 Regional Divergence and the Provincial Perspective

Regional balance and regional divergence is a major policy issue in China. The roots of this concern go back many hundreds if not thousands of years. For example, the Berkeley historian Roy Bin Wong (2011) has highlighted spatial dimensions and concerns in the economic policies of the eighteenth century Qing Empire in the context of the broad sweep of Chinese history:

"Chinese officials understood that the maritime regions of the empire posed different opportunities and challenges than the landlocked interior….The state moreover showed special awareness of the needs of more peripheral and poorer regions to which it sent resources in efforts to make the agrarian economy more viable for populations that were in some places growing quickly because of migration….. Ideas about promoting food supply security and the importance of a materially secure population to the political fortunes of rulers go back to pre-imperial Chinese political thought and took various institutional forms over the two thousand years of in which imperial rule was the norm more often than not."

The needs of a fissiparous empire facing continuous challenges from the outside, with some of the dynasties themselves being from "beyond the Great Wall" (e.g., Mongols and their descendants in the north), meant that the state of wellbeing in all part of China has been a deep rooted concern in policy making.

[3] "Water pollution: A Bay of Pigs moment," http://www.economist.com/blogs/analects/2013/03/water-pollution, Mar 12th, 2013.
[4] http://www.foodsafetynews.com/2013/06/director-general-of-fao-expresses-worry-about-food-safety-and-pollution-in-china/#.UbhwfflQGB8.
[5] http://blogs.wsj.com/chinarealtime/2013/05/21/why-americans-should-worry-about-chinas-food-safety-problems/.

It is this historical context which frames the story of regional divergence in China since the revolution. Kanbur and Zhang (2005) and Fan, Kanbur and Zhang (2011) have documented the evolution of spatial inequality in China during this period using inequality decomposition methods, focusing on population weighted mean consumption across provinces, and across rural and urban areas within provinces. Kanbur and Zhang (2005) identify three phases of regional inequality trend from 1952-2000, and Fan, Kanbur and Zhang (2011) suggest a possible new trend in the latest data. As measured in these studies, regional inequality rose precipitously during the Great Leap Forward and the Great Famine, peaking in 1960. As the economy and society recovered from the Great Famine inequality fell, but began rising sharply again at the start of the cultural revolution in 1967. After the reforms began in 1978, with their initial focus on agricultural production, spatial inequality fell till the mid 1980s.

However, after the mid-1980s China decentralized and opened up, and spatial inequality, especially inter-provincial inequality, rose sharply. The coastal provinces pulled ahead while the inland provinces lagged behind. The econometric analysis in Kanbur and Zhang (2005) identifies measures of decentralization and measures of openness as the key correlates of rising spatial inequality. In the dynamics of the process, it can be seen how decentralization and openness interacted. Opening up provided the initial boost to coastal provinces. More of their rising revenues were left with them under the new dispensation of decentralization. This allowed them to further invest in infrastructure and to attract industry to build on their natural comparative advantage of location, and the spiral was set in motion.

In the face of this rising inequality, it is perhaps not surprising given the historical context elucidated by Wong (2011) that the government began an active program of investment in the lagging regions in the form of a "western development strategy" (also known as "Go West"). As summarized by Fan, Kanbur and Zhang (2011) based on the work of Yao (2009):

"Between 2000 and 2005, the central government started 70 main construction projects and the total amount of investment in western regions reached one trillion Yuan (Yao, 2009). More than one third of funds raised by long term government bonds for construction were directed to the western regions at this time, and from 2002 to 2005 the percent of funds from these bonds directed to the region reached 40% (Yao, 2009)."

These investments and other major trends such as the tightening of labor markets in rural areas are having their effect. Fan, Kanbur and Zhang (2011) identify a possible fourth phase of regional inequality: "overall, regional inequality has leveled off and even slightly declined since the mid-2000s."

A particular feature of this Companion is the perspective it provides from across a range of provinces. The 12 entries range from coastal provinces such as Guangdong and Jiangsu to inland provinces such as Sichuan and Guizhou. Many of these entries are written by local policy makers and analysts, providing a window into local concerns and aspirations. In the fast growing regions like Guangdong the new generation of policy problems issues is identified:

"As the origin of China's market economic reform, Guangdong has encountered almost all of the conflicts, problems, and challenges that have occurred during the socioeconomic

development of the nation…. How should the next round of reforms be initiated to mitigate conflicts and improve the economic competitiveness of the province?... Guangdong is currently at a critical juncture for the transformation of its economic structure and growth model, and acceleration of its social reform. Therefore, the next round of reforms should be staged not only in the economic domain, but also in the government system." (Guo Wanda, entry on Guangdong),

For Sichuan province, on the other hand, much of policy making is now seen through the prism of the consequences of and responses to the massive earthquake of 2008:

"On Monday, May 12, 2008, an earthquake that registered 8.0 on the Richter scale struck Sichuan, with its epicenter in Wenchuan County. This earthquake, the most devastating natural disaster in the area since 1949, resulted in 69,227 casualties with 374,643 people injured and 17,923 missing. Residential, transportation, and industrial infrastructure was thoroughly damaged. The direct loss was reported to have exceeded RMB 1 trillion... After the event, the Sichuan government adopted the following guiding principles towards reconstruction: develop industry, support job creation, assist the poor, protect the environment, and facilitate social development."

Perhaps the most consistent theme in the provincial entries is the combination of good governance to address development and distributional issues. In this they are consistent with the more macro perspective provided in Fan, Kanbur and Zhang (2011), where it is argued that apart from factor market reform to aid the equalization of wages across the country, infrastructure investment, social protection, and governance reform will be the key components of managing regional divergence in China. And it does appear that after a period of increasing spatial inequality government policy is now back once again to the historical norm of concerns about disparities in well being right across the vastness of China.

China is vast internally, but it is also a growing force in global markets and global institutions. Its actions now affect global trends as much as global trends affect its own economic performance. The next section turns therefore to China's international challenges.

4. China and the World

4.1 International Trade and Capital Flows

If one thinks Chinese GDP growth is impressive, the growth of its international trade (exports and imports) is even more astonishing. Since 1980, its trade volume roughly doubled once every four years. In 1990, Chinese exports ranked 14th in the world and its imports ranked 17th only, smaller than Belgium. In 2012, China is the world's largest exporter and the second largest importer. If one were to follow a conventional measure of openness by looking at the ratio of total trade to GDP, China (at close to 70%) is substantially more open than the United States (at about 20%) or Japan (at about 30%). How has China achieved such a rapid rise in trade openness? What does the conventional measure of trade openness fail to capture in the Chinese case?

To understand China's growth in trade openness, beyond looking at the falling tariffs and non-tariff barriers, four factors are especially important: de-monopolization, foreign direct investment, the WTO accession, and global value chains.

Before 1980, China was economically closed. Besides traditional trade barriers, state monopoly in trading rights was a key barrier to trade. As a rule, a majority of Chinese firms couldn't engage in exports and imports directly. If they traded at all, they did so indirectly by going through a state-owned trading company. This raised the cost of participating in international trade, leading to a smaller volume of trade. This also reduced the learning Chinese firms could have obtained from dealing with international clients or global suppliers directly. The country took several stages to de-monopolize the state trading rights by progressively granting more firms the right to trade directly. This contributed greatly to expanding trade volume.

Foreign firms, either wholly owned or joint ventures with Chinese firms, are another major contributor to the Chinese export expansion. In the early days of the reform, most Chinese firms lacked the technical, marketing or managerial knowhow to export successfully to the world market. Foreign firms bridge that gap by taking designs, machines, market orders, and sometimes even foreign made intermediate goods to China, as well as organizing production in China. In much of the 1990s and 2000s, exports by foreign invested firms account for over 50% of China's overall exports. At the same time, imports by foreign invested firms also account for a big (50%) share of the country's overall import shares. The accession to the World Trade Organization (WTO) in 2001 is another watershed event on China's road to becoming a great trading nation. Even in years leading up to the WTO accession, it had engaged in a large number of trade and industrial reforms, inspired by the market access and other demands from the trading partner countries. This included massive reductions in tariff levels, eliminating or reducing non-tariff barriers, and importantly making regulatory regimes of firms more transparent. Many of the reforms were in fact demanded by domestic firms, including and maybe especially by private sector firms; the negotiations for the WTO membership became an opportunity or a commitment device to undertake these reforms. The end results benefit not just firms in trading partners or multinational firms in China, but also Chinese firms in general. Interestingly, even though China's WTO accession required one-sided reforms – China needed to undertake reforms to satisfy the demands of existing members of the WTO but trading partners did not need to do anything, the trade reforms provided a substantial boost to both exports and imports. When importing competing sectors shrink, domestic resources (including labor, raw material and capital) have to be redeployed in other sectors, including sectors that produce for the world market. Calibrations by Ju, Shi, and Wei (2012) suggest that the WTO accession may account for 1/3 or ½ of the observed growth in China's trade expansion (in both exports and imports).

To understand China's trade expansion, one cannot ignore the country's active participation in global value chains (GVCs). With the reductions in policy induced trade barriers, improvement in shipping and other transportation technologies, and reductions in communication costs, production in most sectors has become increasingly segmented across national borders. Over the last two decades, China turns out to be one of the most notable participants in the GVCs. Take iPhones or iPads as examples, most of them sold anywhere in the world are technically produced in and exported by China. But of course, the actual

production utilizes designs from the United States and key components from Japan, Korea, Taiwan and several other economies. Participation in GVCs allows China to be a major producer and exporter of products that would normally considered sophisticated or advanced such as telecommunication equipment, computers, and chemical products (See Wang and Wei, 2010).

These four factors – "democratization" of trading rights, inward foreign direct investment, WTO accession, and participation in GVCs – have, at different stages, contributed to the astonishing growth in the country's overall trade volumes.

International capital flows

China's composition of capital inflows is quite distinct: It is overwhelmingly dominated by inward FDI, with comparatively little foreign portfolio inflows or borrowing from foreign banks. The volume of FDI is an outcome of the country's deliberate policy to attract foreign firms to come to China for their technology and for their managerial and marketing knowhow. By now, China is the largest developing country recipient of FDI. Even as a share of GDP, China attracts more FDI than India, Brazil or Russia. China's relative small volumes of foreign bank borrowing and foreign portfolio inflows are the outcomes of its capital control policies, which have been liberalized at a deliberately slow pace.

While the capital control regimes carry some efficiency costs, they also bring benefits in terms of financial stability. China managed to escape from the worst of the Asian financial crisis of 1997-1999 and the global financial crisis of 2007-2009 to a large part thanks to its capital control regimes. In planning for its financial liberalization programs in the years ahead, this tradeoff between financial stability and economic efficiency need to be borne in mind. In particular, liberalization of capital controls needs to be commensurate with the country's financial supervisory and regulatory capacity and the private sector's risk management capacity.

China's participation in GVCs implies that the share of China's domestic value in its exports is low. Koopman, Wang and Wei (2012) estimated that on average, the domestic value share of exports is about 50%. The share is much lower in sectors that are conventionally thought to be sophisticated because they are more likely to use a high share of imported components and machineries. Understanding GVCs could correct misperceptions about bilateral trade imbalances. For example, much of China's exports to the United States reflect indirect exports of value added to the United States by Japan, Korea, Taiwan and other economies. In comparison, most of the Chinese imports from the United States actually reflect the United States domestic value added. According to Koopman, Wang and Wei (2013), the China-U.S. bilateral surplus in value added term is about 25% less than the bilateral surplus in gross trade.

The Chinese current account surplus is not a mystery. Two factors are especially noteworthy. The first is China's accession to the World Trade Organization (WTO) in late 2001, which, by itself, tends to reduce the domestic return to capital, generating incentives for the country to park a greater portion of its wealth in foreign assets during a transitional period of about six to seven years. The research by Ju, Shi and Wei (2012) suggests that this has contributed one-third of the surplus we observe.

The second factor is a rising ratio of marrying-age young men to young women since 2002. This imbalance has caused young men, and especially their parents, to raise their savings rate in order to compete better in the marriage market. The same force has also contributed to a rise in the corporate savings because more parents with an unmarried son and more young men themselves have chosen to be entrepreneurs. Given the difficulty in getting a bank loan, new entrepreneurs and small firms must rely on self-savings to finance their operation and expansion. Wei and Zhang (2011) and Du and Wei (2013) estimate that this force has accounted for another one-third of the current account surplus.

To be sure, other factors also matter. Collectively, they account for the remaining one third of the surplus. Because the gradual reforms associated with the WTO accession have been completed, the part of the surplus due to this factor is naturally winding down. In contrast, because the sex ratio imbalance is going to rise over the next decade, the part of the surplus due to this factor is not going away any time soon.

4.2 China and the Developing World

With a per capita income of just over $6,000 at official exchange rates, China is classified as an Upper Middle Income Country. Its per capita income is four times that of India, eight times that of Bangladesh and twelve times that of Ethiopia. Chinese official sometimes refer to China as the "world's largest developing country" (Mitchell, 2006). If so, it is clearly *primus inter pares* in its relations with many if not most other developing countries, be they political or economic relations. Our focus here is primarily on economic relations between China and other low income countries. We will highlight two aspects of the relationships—firstly, China as a comparator and guide for other developing countries and secondly Chinese trade, investment and aid, particularly in relation to Africa.

It is interesting to begin by noting the tradition of comparison between the two giants of the developing world, India and China, as reflected in the entry in this volume by Pranab Bardhan. India entered its economic reform phase a decade after China, and has had historically high growth rates, especially in the 2000s before the global financial crisis, but these growth rates have been significantly below those of China, and the gap in per capita incomes has widened over the years. At the same time, social indicators in China have by and large been at higher levels, and have improved faster, than those in India.

Amartya Sen (2011), in particular, has highlighted a range of differences in achievement between the two countries. Life expectancy is 73.5 years in China and 64.4 years in India; adult literacy rates are 94% and 74%, respectively; triple vaccination immunization rates for children are 97% and 66%. Of course some of this is explained simply by the fact that China has a much higher income level than India. But the burden of Sen's argument is that income alone cannot explain variations in social indicators—how that income is used matters as well. He points out that public expenditure on social sectors in India lags behind that in China. However, as Sen has also pointed out in his writings, the Great Famine of 1959-62 killed more than 30 million people in China, whereas the Indian political system, backed by a free press, has ensured that such a massive catastrophe has not happened in India since independence. Sen has helped to crystallize a debate on the advantages of the Indian system in preventing famines while at the same time

allowing widespread "silent hunger" in the form of malnutrition. For India as for other developing countries, comparisons with China are very much part of the policy debate.

More generally in the realm of economic policy, the Chinese success has acted as a role model for other developing countries, and has also entered the debate on the relevance of the "Washington Consensus" for development strategy. As developed by Justin Lin, in his entry to this Companion and in Lin (2012), the Chinese experience leads to a significant modification of the tenets of the Washington Consensus. While market discipline and market mechanisms are not jettisoned by any means, purposive involvement of the state in helping structural transformation, including through industrial policy, is the lesson that is being drawn across the developing world from the Chinese experience.

But it is not only the impact of China's experience on development thinking that has been important. The direct effect of China on trade, investment and aid has also been significant. As Mitchell (2006) notes, among the top 10 sources of oil imports of China are Angola, Sudan, Equatorial Guinea and Indonesia. China has equity oil stakes in many Latin American countries, including Venezuela. It is a major purchaser of a range of minerals from Brazil. It accounts for 40% of Chile's copper exports. The net result of these relationships is that the growth in many developing countries is directly linked to a healthy growth in China, and the pattern of that growth matters too. If China switches its pattern of demand from industrial to a more consumer oriented structure, then this could in turn have repercussions, including perhaps opening up of export opportunities for some countries. This effect could be further strengthened by rising wages in China allowing some countries to occupy export niches previously taken up by Chinese light manufactures.

China had also begun to itself invest in developing countries, and this investment goes beyond that associated with oil and natural resources. In particular, China's economic relations with Africa have garnered a lot of interest in the analytical and in the popular discourse. Deborah Brautigam, a contributor to this Companion, quotes Chinese figures that show that

"…as of end 2011, 15.6% of their Africa investment is in manufacturing and 30.6% in mining, with finance at 19.5% and construction at 16.4%. From what I can see, there is far more manufacturing investment from China than from the United States." (Brautigam, 2013) Brautigam's work details the relationship at the country specific level as well, including in Ethiopia:

"….when Ethiopia's economy began to grow at Asian rates, the Chinese saw increased opportunities. Not all were in the direction stereotypes would have predicted. For example, while Chinese petroleum companies have done work in Ethiopia, this has been largely under contract for others. Rather, the Chinese unleashed a variety of state-sponsored tools for building economic ties." (Brautigam, 2012).

Not all Chinese investment in Africa has come without adverse comment or reaction. Although there is little in the way of systematic evidence, journalistic reporting is pointing to growing tensions. In its survey of China in Africa, the Economist magazine, paints a cautionary picture: "Once feted as saviours in Africa, Chinese have come to be viewed with mixed

feeling—especially in smaller countries where China's weight is felt all the more….Chinese expatriates in Africa come from a rough-and-tumble, anything-goes business culture that cares little about rules and regulations. Local sensitivities are routinely ignored at home, and so abroad." (The Economist, 2011).

Thus an interesting connection is made between improvement of governance within China and improved practices in Chinese investment abroad.

Finally, Chinese aid to Africa (and elsewhere) is increasingly coming under scrutiny, and is discussed in Deborah Brautigam's entry in the Companion. Chinese official aid expenditures on grants and interest free loans are estimated to be $2.7 billion in 2011. Adding in concessional loans would increase this to $6 billion. There is considerable discussion among the "traditional" OECD donors on Chinese aid practices. For example, China typically does not put economic and especially political conditions on aid, a stance which is greatly welcomed by aid recipients, and it emphasizes economic infrastructure as opposed to broader issues of governance. Thus in the aid arena, as in the arena of economic policies, Chinese practice differs from the norm and is leading to a healthy debate on the best methods of delivering development assistance.

China's growing importance in development assistance is one aspect of a more extensive, and intensive, engagement with institutions of global governance, and turn now to an exploration of these challenges.

4.3 International Institutions and Global Governance

China's participation in the international economic governance system has evolved in three stages. Before 1980s, as a first stage, the country chose to stay out of the international system, as reflected in its low trading volume, minimum cross border capital flows, and economic mismanagement at home. In the second stage, from 1980 to sometime close to 2010, China is a follower of international rules set largely by the United States and other systemically important economies. This was not done with resentment. In fact, both the government and the private sector often invoke the need to "follow the common international norms and practices" as a roadmap for economic reforms at home, which has greatly benefited the Chinese economy. In more recent years, China may be entering a third stage, actively seeking to be a part of the rule-makers. An example is China's suggestion that the dominant position of U.S. dollar in international trade settlement and as a reserve currency can be revised and re-visited in ways that might be beneficial to developing countries in general. China has also started to promote the internationalization of its currency, apparently ahead of other countries at similar or even somewhat higher stage of economic development.

To understand the Chinese approach to economic reforms, it is important to appreciate the role of digesting and following international norms and rules. Of course, China does not blindly follow foreign advice or foreign models. Its reform programs have many distinct features such as the dual-track reforms, special economic zones, and super-national treatment of foreign firms operating in China. Nonetheless, examples of international practices and norms often shorten the country's learning curve significantly.

The WTO accession is a good example of reformers in the government using the pressure of international rules and that of trading partners to further the goals of domestic reforms. China used to have a myriad of very complex and nontransparent web of government regulations, many of which were either not published or contradictory to each other. The main beneficiaries of the opacity are a small number of politically connected firms and bureaucrats who yielded enormous discretionary power. The main victims are domestic private firms, and many unborn and still-born entrepreneurs, in addition to multinational firms operating in China or wanting to do business with Chinese firms. As part of the WTO accession negotiation, China had to make the regulatory regime much more transparent. While foreign firms were the principle vocal proponents of the reform, the largest beneficiaries were in fact domestic Chinese firms. In that sense, the WTO accession is a significant event for China in ways beyond lower import trade barriers.

In the years leading up to China's membership in the WTO, there were concerns (mostly outside China) that China will be involved in so many trade disputes that it will overwhelm the WTO's young dispute settlement mechanism (DSM). The fear is that not only many countries will bring cases against China to the DSM but China will also bring equal number of cases against other member countries. In the six years after China's membership, one was surprised to find that at least half of the fear was not realized. China chose not to bring any case against other countries in spite of it being subjected to many cases brought by the United States, the European Union and some other economies. Because the system is new and novel to China, it apparently decided to observe and learn. However, in 2007, China brought its first case (against the United States). It has apparently decided to be as active in initiating complaints as in receiving them.

Since the onset of the North Atlantic financial crisis, because China has emerged relatively stronger than most high-income countries, the global crisis has led to some re-thinking in China about its relationship with the international economic system. In particular, it is more willing to question whether the rules that have been governing the international economy as conceived and championed by the United States and other leading industrial economies are optimal for the world economy. China's surpassing of Japan as the world's second largest economy since 2011 has added to its confidence. As a result, China has started to demand a more significant role in the rule making process. A visible but perhaps less significant part of the process is in the personnel areas of international organizations. Chinese nationals became deputy secretary general of the United Nations in charge of economic affairs, deputy managing director of the International Monetary Fund, senior vice president and the chief economist of the World Bank, vice president of the Asian Development Bank, and so on. This is not as significant as it may have appeared in part because nationals of India, an economy half the size of China, held similar positions long before Chinese did.

A more important part of the process is on ideas on the agenda of major international fora. In March 2009, the governor of China's central bank opined that an international monetary system that depends so heavily on a single reserve currency, the U.S. dollar, is inherently risky and could make the consequence of a financial crisis worse than otherwise, and advocated a move to a greater use of IMF's special drawing rights (SDRs) as a reserve currency. When the call for a greater SDR use didn't receive the necessary political support from the United States (unsurprisingly), the Chinese central bank and the Chinese government started to do something

that is at least partly within their power – to promote greater international use of the RMB as a currency for trade settlement, for denominating financial swap lines among central banks, and for limited use as a reserve currency by other central banks.

The promotion of internationalization of the RMB is unusual in several ways. First, almost all other countries at China's stage of economic development are resigned to using other countries' currencies, typically those of a few high-income countries with a deep and liquid capital market, for all international transactions in both goods and services trade and financial trade. In fact, the U.S. dollar alone takes up about 70% of global non-gold foreign exchange reserve. A small number of other currencies, the euro, the Japanese yen, Swiss franc, and pound sterling, in particular, take up the majority of the remaining 30%. Due to concerns for potential complications for domestic monetary policy operations, Japan actively discouraged any international use of its currency during its peak economic miracle years. (When it changed its mind and started to promote internationalization of the yen in the 1990s, it didn't make much progress.) The world market for international currencies appeared to be settled in its equilibrium without much appetite for a new currency. So China's move is usual and unprecedented when benchmarked to other countries' experiences.

Second, China's promotion of RMB internationalization is not without risks. From the perspective of safeguarding financial stability, the optimal sequence of reforms dictates that China needs to address the governance problems within its banking sector as each of its large majority state-owned bank represents a potential systemic risk, to have market determined interest rate and exchange rate, and to strengthen its domestic financial supervisory capacity before it can safely lift capital controls which would be a prerequisite for any true internationalization of the RMB (Wei, 2013). Instead, in an eagerness to promote the global use of the RMB, China has selectively and creatively opened its capital controls through the use of qualified foreign institutional investors (QFII) scheme and qualified domestic institutional investors (QDII) scheme, the use of Hong Kong based financial institutions to undertake RMB-related financial transactions otherwise not allowed by the capital controls regimes. These experiments have gone reasonably smoothly and are well in accordance with China's well-practiced gradualist style of reforms. China is now contemplating a bolder move to lift most of the remaining measures of capital controls in the next few years. If that policy change proves to be premature, China might risk a financial crisis of the kind that Thailand or Korea experienced during 1997-1999. On the other hand, if that policy change succeeds, the Chinese currency could become a serious rival to the U.S. dollar, or at least displacing the euro and the yen over time as a major alternative to the U.S. dollar. Perhaps more significantly, ideas out of Beijing on reforming international economic system may attract a more attentive audience.

5. Conclusion: Emerging Issues and Future Challenges

China is now at a crossroads. After more than three decades of growth based on removing policy distortions to realize its comparative advantage, government investment in infrastructure to boost aggregate demand and productivity, and promotion of exports and foreign investment, this growth model has shown signs of diminishing returns. There are two paths ahead. China can be another South Korea, which is embarking on a transition to a more innovation based growth model, or it can become Argentina, which used to have a more

promising and favorable future than most other developing countries, but managed to have squandered the opportunity and has been stuck in a middle-income trap. Of course, China wishes to take the first path. It could adjust its growth model, developing more domestic demand and cultivating legal and education systems that are compatible with an innovation based growth model.

To stay on an upward trajectory of economic growth, the Chinese economy has to face a host of emerging challenges. First, the growing demands of an increasingly affluent and urban population threaten to undermine an already stressed natural resource base. Especially pressing environmental issues include climate change, air pollution, water scarcity and pollution, and land degradation. These environmental challenges are exacerbated by government policies that distort prices for energy, water, and land.

Second, inequalities across and within regions have been on the rise, raising concerns over the potential impact that such disparities could have on future economic growth, social equity, and political stability (OECD 2012; Fan, Kanbur, and Zhang 2011). Although less prosperous regions have experienced increased economic growth during the last decade as a result of preferential policies and investments under the "Western development strategy", regional disparities continue to be on the rise (Golley 2007). The government's recent Income Redistribution Plan—which calls for state-owned companies to pay higher taxes and dividends, increased minimum wage, and improved access to the healthcare and pension system (especially for migrants)—is a significant step by the government to rebalance China's growth and spread wealth more evenly. However, the plan's vague wording and lack of specific directives could act as a potential impediment to its implementation.

Third, China's large network of state-owned enterprises—which hold monopolies in "strategic sectors" such as banking, telecommunications, energy, and utilities—distort the balanced development of China's economy due to weak corporate governance structures and subsidized inputs. For example, state-owned enterprises have access to low interest loans from the state-dominated banking sector, while (often more efficient) private small and medium sized enterprises are turned away. Such preferential access to cheap credit for state-owned enterprises stifles competition and innovation from the private sector (both domestic and foreign) and encourages the inefficient allocation of resources, over-investment, and overcapacity in industrial production (World Bank 2013; Chen, Jefferson, and Zhang 2009). At the same time, the monopolistic and weak corporate governance structures of SOEs has bred special interest groups of political and economic elites who have profited from preferential treatment.

While the enormity of the challenges China faces cannot be overstated, no one should underestimate China's ability to rise to the challenges either. After all, the reforms and transitions of the last three decades and half were no easy feat. What are the things China can do that could enhance the chance of success in its quest to become the next Korea? The reform process can continue to put greater focus on supporting equitable and sustainable growth of China's economy. The increasingly scarce and degraded state of natural resources demands policies that strengthen environmental regulations and their supervision. More efficient and sustainable management of natural resources can also be supported through reforms to resource pricing systems so that consumers receive the proper signals about the true cost of resource use.

In terms of inequality, policies are needed to equalize opportunities for income generation, including greater access to education—especially among the rural poor—and the elimination of restriction on rural-urban migration. By spreading wealth more evenly, the government hopes to rebalance China's economy so that economic growth originates more from domestic consumption and demand. The gradual removal of institutional barriers—including the liberalization of interest rates and reduction of input subsidies—alongside the privatization and restructuring of SOEs will help to create a vibrant and innovative private sector that can compete on an equal footing with state-owned enterprises. These latter reforms will inevitably face opposition from the politically and economically influential individuals who stand to lose their privileged (and profitable) position within the SOE apparatus.

The Chinese model of development is not a silver bullet of development policies that can be easily replicated in other developing countries. Rather, China’s development experience should be seen as a process toward a more efficient, market driven, and lately equitable final goal through gradual reforms, experimentation, and learning-by-doing.

Going forward, whether China can succeed in its transition to a new growth model, and how it decides to meet countless challenges that will undoubtedly emerge, will have socioeconomic consequences not only for the Chinese but also for the rest of the world.

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