

Labour market transition, income inequality and economic growth in China

Ming LU* and Hong GAO**

Abstract. *After “opening up” in 1978, China followed a development strategy that has led to internal and external economic imbalances, especially since its labour market reform of the mid-1990s and the resulting surge in rural-to-urban migration. Low labour costs emerged as its main comparative advantage, but its over-reliance on exports for growth was starkly exposed by the global economic crisis of 2008. This, coupled with widening income disparities, could jeopardize the sustainability of China’s growth unless it adjusts its reform and development strategies to promote income equality and domestic consumption. The Employment Contract Law in force since 2008 could signal institutional change in the right direction.*

Open economies, including China, are still grappling with the lessons and after-effects of the subprime crisis which began in August 2007. This crisis was primarily triggered by individuals’ consumption and savings behaviour and the resulting trade imbalances, mainly between China and the United States. Compared with GDP growth, domestic consumption in China has indeed increased only modestly over the past 30 years, partly as a result of widening income inequality, producing a secular decline in the consumption–GDP ratio. China’s low domestic consumption together with its huge production capacity have led to over-dependence on increased exports for growth, a situation further entrenched by the low labour costs underpinning the comparative advantage of Chinese products.

Since the mid-1990s, China has maintained its low labour costs through large-scale rural-to-urban migration and urban labour market reform in response

* Fudan University and Zhejiang University, email: lm@fudan.edu.cn. ** Fudan University, email: gaohongfd@gmail.com. This article draws on an earlier ADBI Working Paper by the authors (see Lu and Gao, 2009). Research support from the Asian Development Bank Institute (ADBI), the Ministry of Education of the People’s Republic of China (10YJA790126), the Fudan Lab of China Development and the Shanghai Leading Academic Discipline Project (B101) is gratefully acknowledged, as are helpful comments from the participants in the ADBI conference “Labor Market in the PRC and its Adjustment to Global Financial Crisis” (Tokyo, 18–19 June 2009), especially from Mr Ichiro Otani. The authors also thank Shiqing Jiang for research assistance.

Responsibility for opinions expressed in signed articles rests solely with their authors, and publication does not constitute an endorsement by the ILO.

to the global relocation of labour-intensive manufacturing industries to China. By comparison with other large economies, China's trade dependency ratio is excessively high. Through international trade, however, a balance was struck between China's high savings ratio and "excessive" consumption in the United States. But what accounts for China's comparatively low labour costs? What are the consequences of this unbalanced development path, and in what sense has the recent economic crisis provided China with an opportunity to redress the balance? Answers to these questions are critical to gain greater understanding of the linkages between labour market reform, China's growth pattern and the economic crisis, and to develop better ways of sustaining China's long-run growth.

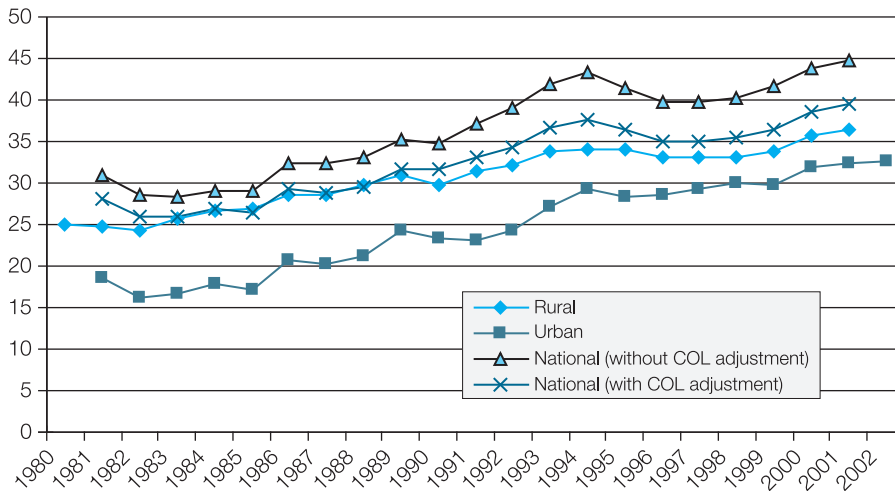
This article relates the recent economic crisis partly to the labour market reform that has been taking place in China since the mid-1990s; and it also discusses why and how China should adjust its development strategy. The next section examines China's internal and external imbalances and the effects of the subprime crisis on the Chinese economy. The third section presents a brief review of developments during the labour market reform of the mid-1990s. The fourth section then looks at how the labour market reform weakened labour's market position and widened income disparities; it also outlines the potential threats to economic growth posed by income inequality. In the final section, an explanation is offered of why China must adjust its labour market reform strategies in order to narrow its income inequality and sustain its economic growth, especially in the wake of the recent economic crisis.

China's development path and the global economic crisis

The recent economic crisis was both a short-term shock to the Chinese economy and a longer-term challenge to its growth model. China has indeed grown rapidly since the initiation of its open-door policy in 1978, greatly benefiting from the low labour costs which largely account for the comparatively low prices of its products. Low labour costs – the main driver of China's export-oriented development strategy – have been primarily sustained by labour market reform. However, the unbalanced growth path China has been following for the past 30 years raises several potential problems. These problems were previously hidden by the rapid, export-driven growth of GDP, especially during the high-growth years of 2001–07, but they have become clearly visible since the onset of the crisis. This unbalanced growth¹ was accompanied by a process of marketization, leading to a "dual

¹ In Mundell (1962), the terms "internal imbalance" and "external imbalance" are used to refer to the disequilibrium in the domestic market and the saving–investment gap, respectively. Here, we use "internal imbalance" to indicate the relatively slow growth in consumption that is partly due to widening income inequality; and "external imbalance" to indicate the expansion of international trade, especially of net exports, which results in remarkable growth in foreign exchange reserves and is one reason for the imbalance in international trade between China and the United States.

Figure 1. China's Gini coefficient, 1980–2002



Note: COL = cost of living.

Source: Ravallion and Chen (2007).

imbalance” (i.e. both internal and external) which will undermine the sustainability of economic growth if no adjustment is made.²

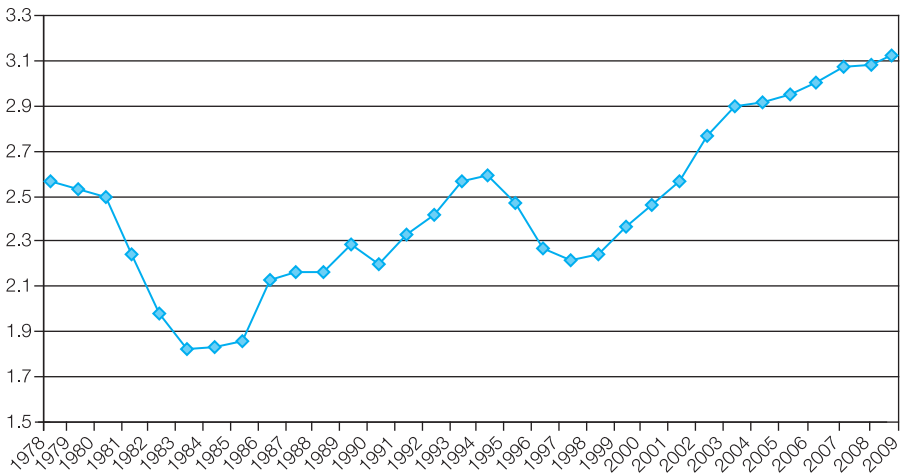
The internal imbalance – reflected in the decreasing share of consumption in GDP relative to investment and export-driven growth – is basically linked to China’s widening income inequality. The national Gini coefficient increased to around 0.45 in 2002 (see figure 1). When adjusted for the cost of living, the Gini coefficient is lower, but the trend increase is still evident. In 2007, the national Gini coefficient was approximately 0.48 according to the estimation by Li (2008).³ The Gini coefficients for both rural and urban areas have also kept increasing (figure 1). It is worth noting, however, that fluctuations in income disparity in the country as a whole (especially the decreases of the mid-1980s and mid-1990s) were caused by narrowing of the urban–rural income gap (figure 2).

Growing income inequality is likely to have several consequences that are detrimental to economic growth. First, as inequality rises, domestic consumer demand may grow more slowly. According to the law of diminishing marginal propensity of consumption, the rich at the upper end of the income distribution

² As argued below, there are two ways in which sustainable economic growth can be jeopardized by widening income inequality. First, on the demand side, rising income inequality can harm growth because of low domestic consumer demand according to the law of diminishing marginal propensity of consumption. Second, on the supply side, Wan, Lu and Chen (2006) find that inequality has a strong negative impact on physical investment, whereas its influence on human capital is positive, but weak. The net effect of income inequality on economic growth is therefore negative, irrespective of short-run or long-run considerations.

³ It should be noted that China experienced a capital market boom in 2007, so the estimated Gini coefficient for that year could be abnormally high.

Figure 2. Urban–rural income gap (ratio), 1978–2009



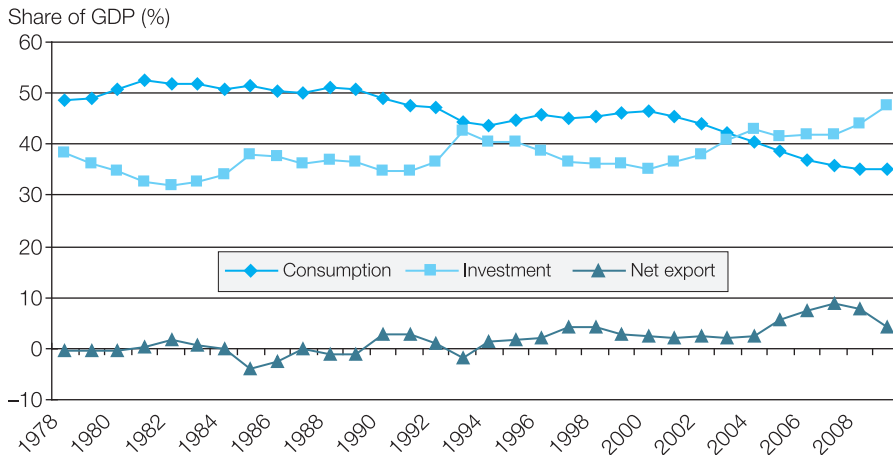
Note: The ratio is per capita annual disposable income of urban households to per capita annual net income of rural households. Urban and rural incomes have been deflated by the urban and rural consumer price indices, respectively, except for 1978–1984 and 1988–1989 due to lack of indices for these years.

Source: *China Statistical Yearbook 2010* and authors' calculations.

are likely to save more. The poor, at the lower end of the income distribution, especially those whose income risk increases with marketization, are also more likely to save money. And such savings on the part of both the rich and the poor have increased China's household savings ratio relative to that of other countries. Ravallion (1998) confirms that initial wealth inequality has a significant negative effect on both household consumption growth and the national mean consumption growth rate. Yang and Zhu (2007) provide evidence of how consumption has been constrained by widening income inequality. Chen, Lu and Zhong (2010) find that, compared with urban residents, migrant workers (who have lower incomes and face institutional discrimination in urban areas) have a lower average and marginal propensity to consume, which also explains how personal inequality is related to low consumption growth.

Figure 3 illustrates the dramatic decline in the share of household consumption in GDP. From 48.79 per cent in 1978, it declined steadily to 35.45 per cent in 2007 and 35.11 in 2009. Despite China's comparatively high public investment spending, the continuous decline in household consumption is still not compensated for, resulting in slower growth in aggregate domestic demand. It is noteworthy that China's high GDP growth has to a large extent been sustained by high investment growth, including public investment. Investment increases domestic demand in the short run, but in the medium and the long runs it results in over-capacity of production, which needs to be absorbed by external demand. Given China's low domestic demand and production over-capacity, net exports are indeed the only way to achieve high GDP growth. The rising trend in the investment–GDP ratio is also shown in figure 3.

Figure 3. Household consumption, investment and net exports, 1978–2009



Note: GDP is calculated using the expenditure approach. Inventory is included in investment.

Source: *China Statistical Yearbook 2010* and authors' calculations.

Low domestic demand, coupled with the high production capacity of Chinese enterprises, have led to sustained export growth. As a result, China's trade dependency ratio (i.e. the sum of exports and imports over GDP) is particularly high, compared with that of other large economies. This contradicts the general rule that the trade dependency ratio is usually lower in larger economies. In 2007, China's trade dependency ratio stood at 66.30 per cent,⁴ compared with 20–30 per cent in other large economies.

The current system of foreign exchange in China requires nearly all trade surpluses, foreign direct investment (FDI) inflows and remittances from abroad to be converted into yuan (CNY) at the bank. The banks then trade the foreign currency through the China Foreign Exchange Trade System. Purchases and sales of foreign currency on this market determine the exchange rate of the CNY. Generally, the Central Bank buys nearly all of the foreign currency in order to stabilize the exchange rate and therefore has to issue corresponding amounts of CNY. This increased liquidity (especially that resulting from international trade surpluses) was one of the reasons for the high inflation and capital-market bubble that built up before the Chinese economy was hit by the crisis in the autumn of 2008. At present, it is also one of the reasons for China's high inflation.

Wide income inequality also mirrors the growth pattern of the Chinese economy, with its heavy reliance on low labour costs, which can be explained by three labour market factors. First, a massive influx of rural workers into the

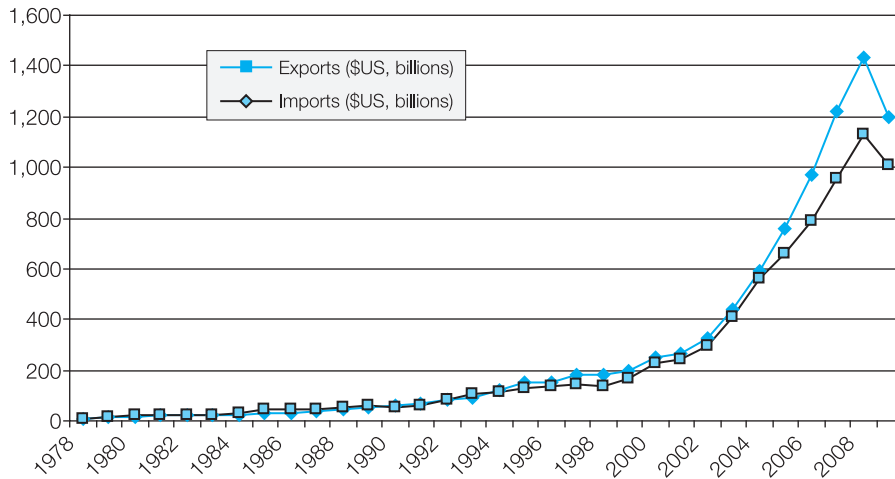
⁴ Authors' calculations based on National Bureau of Statistics: *China Statistical Abstract 2008*.

cities occurred as from the mid-1990s in response to the needs of globalization and the relocation of labour-intensive industries from the developed economies to China. Although rural–urban migration restrictions were relaxed in the mid-1980s, actual large-scale rural-to-urban migration emerged only in the mid-1990s; and throughout the decade 1994–2004 increases in migrant workers’ wages were quite limited.⁵ Second, labour market reform triggered massive lay-offs of redundant workers from state-owned enterprises (SOEs) between 1996 and 2000. This led to more severe competition in the labour market with downward pressure on wages. And third, low labour costs also result from poor labour protection, especially for migrant workers and redundant workers from SOEs. Many of the workers newly employed in the private sector were not given contracts, so they were not covered by social security, and their labour costs were therefore lower. Such poor labour protection is partly a consequence of fiscal decentralization and performance competition between local governments which promote short-term economic growth by attracting both domestic and foreign investment, while overlooking workers’ interests. In short, the combination of China’s urbanization and globalization has weakened the market position of labour because capital can move easily across countries and regions so long as there is sufficient labour supply; but the mobility of labour is lower than that of capital. This is the basic reason why labour’s share of national income has declined since 1996 – as will be shown below.

Because of its unbalanced growth path, the Chinese economy suffers from an external imbalance as well as an internal imbalance. The external imbalance is associated with the condition of low labour costs, which was not fully established until the mid-1990s. Low labour costs, together with an undervalued currency since 1994, are indeed the main sources of China’s comparative advantage on overseas markets and have resulted in China’s rising exports and huge foreign currency reserves. According to estimations by Morgan Stanley and *The Economist* (2007), although Chinese workers’ wages increased between 2000 and 2006, the concomitant rise in labour productivity was much larger. Actual unit labour costs therefore declined significantly. Empirical studies also concur on China’s comparative export advantage – especially in labour-intensive products – in line with the Heckscher-Ohlin view. For example, using international trade data, Yue and Hua (2002) calculated the revealed comparative advantage (RCA) index of Chinese products. Their calculation confirms that between 1980 and 2000, China’s comparative advantage shifted largely from resource-intensive products to labour-intensive ones, and that international trade enhanced this trend. Thanks to this shift in comparative advantage, the increase in exports from China has been enormous (figure 4). Imports also grew over the same period, but not as rapidly as exports. Before 1994 net exports fluctuated around zero, but since then exports have consistently exceeded imports (figure 5). As a

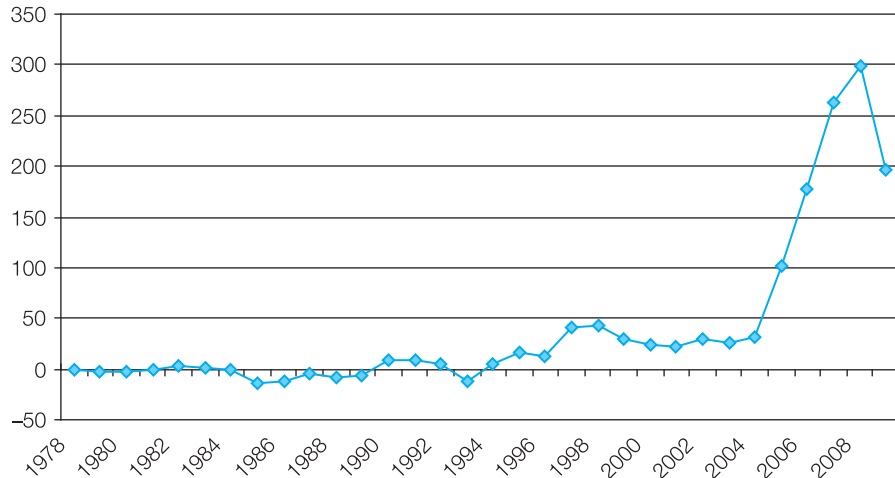
⁵ This is consistent with the dual economy theory (Lewis, 1954), which predicts that a developing economy experiencing urbanization and industrialization goes through a phase of “unlimited labour supply” with limited wage growth.

Figure 4. Exports and imports, 1978–2009



Sources: *China Statistical Abstract 2008*, *China Statistical Abstract 2010* and the National Bureau of Statistics.

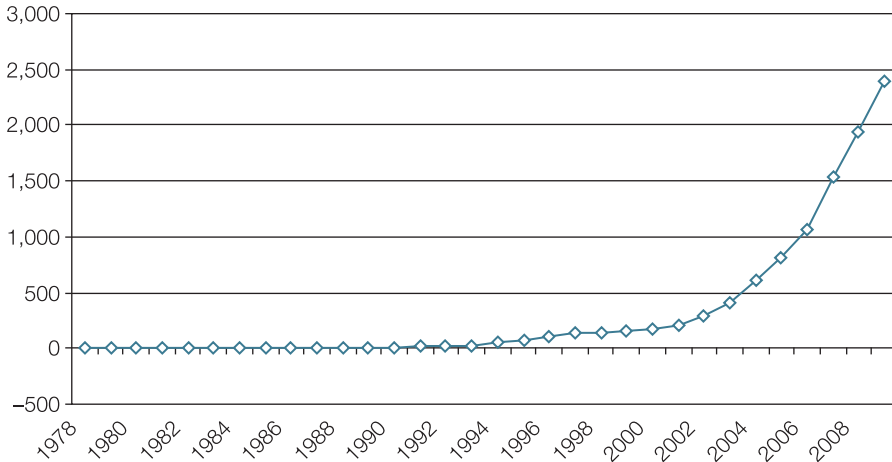
Figure 5. Net exports, 1978–2009 (\$US, billions)



Sources: *China Statistical Abstract 2008*, *China Statistical Abstract 2010* and the National Bureau of Statistics.

result, from 1994 onwards the country’s foreign exchange reserves also grew steadily, especially in recent years (figure 6). By March 2011, they amounted to US\$3,044.674 billion, which is equivalent to almost half of China’s total GDP. Chinese entrepreneurs claim that their exports to other countries are inexpensive mainly because of low labour costs and high productivity, but there has also

Figure 6. Foreign exchange reserves, 1978–2009 (\$US, billions)



Source: *China Statistical Yearbook 2010* and the National Bureau of Statistics.

been a rise in the incidence of international trade disputes between China and other countries. According to Stevenson (2007a and 2007b), China ranked first in the world for the number of anti-dumping investigations it has undergone. During the first half of 2007, 18 anti-dumping investigations were undertaken against China, accounting for 30 per cent of all anti-dumping investigations worldwide. Furthermore, the rapid increase in foreign exchange reserves is also responsible for China's holdings of United States assets. At the end of December 2008, the State Administration of Foreign Exchange (part of the People's Bank of China), managed close to US\$2.1 trillion: US\$1.95 trillion in formal reserves and between US\$108 and 158 billion in "other foreign assets". China's state banks and the China Investment Corporation (China's sovereign wealth fund) together managed another US\$250 billion or so. This put China's total holdings of foreign assets at over US\$2.3 trillion – i.e. over 50 per cent of China's gross domestic product, or roughly US\$2,000 per capita (Setser and Pandey, 2009).

These internal and external imbalances, including the international imbalance between China and the United States, could to some extent be viewed as reasonable provided labour productivity in the United States can continuously be enhanced. The savings ratio in the United States began to decline in the mid-1980s, when the United States established itself as the global leader in technological innovation. Labour productivity increased more rapidly after 1995, and high productivity has been an essential driver of economic growth in the United States since then. With increased productivity, workers' wages rise. Once the expectation of increases in future income is formed, individuals tend to borrow in order to consume at once so as to smooth consumption and maximize lifetime

utility.⁶ The United States' highly developed capital market further encouraged this trend. Meanwhile, industrializing countries such as China have accumulated huge trade surpluses since the mid-1990s, and purchases of United States bonds and other United States assets contributed to the appreciation of those surpluses. Thus, such countries (including China) have in essence shared in the rapid growth of the United States economy. However, one vital issue behind this imbalance is the extent to which the appreciation of United States assets is related to real productivity gains. If the trend of productivity enhancement can be sustained, high returns may be obtained from holding United States assets, and there may not be a significant departure of the financial economy from the real economy. Otherwise, risks may mount and adjustments may have to be made. In this sense, the 2008 crisis was a form of structural adjustment, signaling that it was high time for China to make some internal policy changes to reduce its dependence on exports and stimulate domestic demand. As reflected in figures 4 and 5, exports, imports and net exports all declined significantly in 2009.

Economic shocks also resulted in unemployment. At a press conference during the second session of the eleventh National People's Congress on 10 March 2009, Yin Weimin, the Minister for Human Resources and Social Security, described the employment situation as "disconcerting". First, there was a dramatic decline in job creation in urban areas, and the urban unemployment rate rose. Second, it became more difficult for migrant workers to find work, and many of them lost their jobs. As from September 2008, employment suffered a series of major shocks, especially in the export-led manufacturing sector in the Pearl River Delta and the Yangtse River Delta. Many factories shut down, while surviving enterprises reduced their labour force or asked their workers to take "long holidays". Most of their employees were migrant workers (*Mingong*) from inland rural areas. Many of them lost their jobs and went back to their home towns in the second half of 2008, especially after September. According to survey results released by the Ministry of Human Resources and Social Security, there were over 130 million migrant workers at the end of 2008; 60 per cent of them returned home for the 2009 Spring Festival – 10 per cent more than in the previous year. In 2009, 20 million migrant workers were looking for work. Compared with the previous year, the number of enterprises planning to hire in the month after the Spring Festival had dropped by 12 per cent; the overall number of vacancies was 10 per cent lower (*China Daily*, 2009). During the annual meeting

⁶ Declines in the United States savings ratio have been accompanied by increased inequality of personal income, which appears to be the opposite of what China experienced. However, unlike the situation in the United States, functional inequality is what matters in China. Current-period savings are transformed into investments, and investment returns constitute capital income in the subsequent period. However, as savings are mostly government- and corporate-held, the rich benefit the most from savings. The financial market is less developed in China, and there are few channels for the poor to invest and earn capital income. Furthermore, corporations in China seldom give bonuses. Returns to functional savings therefore benefit the rich more, which in turn widens inequality of personal income and leads to low domestic consumption growth.

of the People's Congress in March, the Ministry of Human Resources and Social Security announced that about half of the migrant workers had gone home for the Spring Festival, of whom only 80 per cent had returned to the cities after the Festival; 45 million of these migrant workers found jobs, but 11 million were still unemployed. According to the National Bureau of Statistics, the urban registered unemployment rate increased from 4 per cent in 2007, to 4.2 per cent in 2008 and 4.3 per cent in 2009.

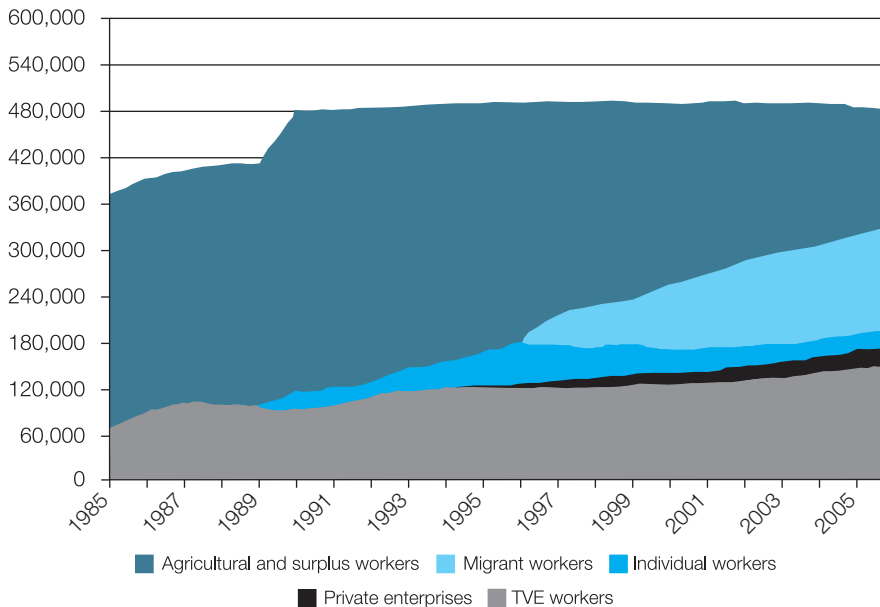
The turning point in labour market reform: What happened around 1996?

As explained above, China established its growth pattern of low labour costs and high exports in the mid-1990s. This also marked the starting point of large-scale rural-to-urban migration, radical labour market reform, and the era of the undervalued CNY.

Though restrictions on rural-to-urban migration were gradually lifted from the mid-1980s onwards, the scale of rural-to-urban migration remained modest until the mid-1990s. The significant subsequent increase in the number of migrants is shown in figure 7. Growing numbers of migrant workers have indeed been leaving rural areas as urbanization and industrialization have advanced. The inflow of rural migrants into China's cities intensified labour market competition, thereby weakening the market position of labour and reducing urban workers' earning power relative to the growth in labour productivity. Large-scale migration compressed wage growth in the urban labour market, but it did not significantly affect unemployment (Liu and Zhao, 2009).

An important development in this connection was labour market reform, which accelerated from 1996 onwards. Before its policy of "opening up", initiated in 1978, China had a system of planned employment designed to satisfy the needs of a "catching-up" development strategy. To generate SOE revenues for investment in heavy industries, the Government imposed two features of a planned economy on the labour market: the distortion of labour costs and segmentation. On the one hand, the State compressed wages and assigned employment through the Ministry of Labour. Though there were wage disparities between industries and enterprises, these disparities could not be reduced through labour market clearance and the reallocation of labour. On the other hand, because of the "catching-up" development strategy (which favoured capital-intensive heavy industry), demand for labour was relatively low. So the Government attempted to eliminate unemployment through administrative means, with the result that enterprises hoarded labour. The years between 1986 – when the labour contract system was first introduced – and 1996 marked the first stage in the reform of the urban labour market, which was originally undertaken in order to enhance efficiency and encourage competition between SOEs. Wage equality was traded off for greater efficiency by granting bonuses and subsidies (Meng and Kidd, 1997). The SOEs' recruitment policy based on quotas was gradually abolished, and SOEs were pushed into the competitive market

Figure 7. Rural labour, 1985–2006 ('000s)



Note: "Surplus workers" are those agricultural workers who have zero marginal product due to high labour/land ratios, but who are unable to find non-agricultural employment because of institutional or other restrictions. "TVE workers" are those who work in township or village enterprises.

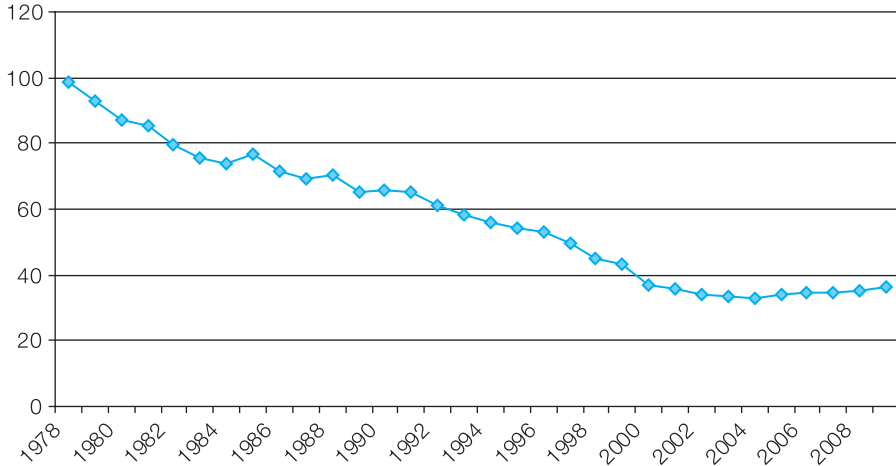
Source: Fang Cai's estimation and presentation at Fudan University.

and held responsible for their losses, to the point of bankruptcy. At that time, however, only recently trained labour market entrants were marginally allocated through the market, as the recruitment process was not yet fully marketized. As a result, the effect of labour market reform at that stage was mainly a gradual adjustment of the income structure. More and more workers earned their living in non-state enterprises and from non-wage sources.

Reform of the labour market was officially initiated in July 1996 and started in Shanghai with the establishment of re-employment service centres for the SOEs' redundant employees. Over the period 1997–98, the reform was rapidly extended to the entire country. Redundant SOE workers were required to leave their original jobs and to join the re-employment centres.⁷ As from 2000, enterprises acquired greater autonomy in their employment strategies and were required only to pay adequate compensation when laying off employees; in SOEs this is often done according to the "buy-out-working-years" (*maiduan gongling*) approach. Some of the workers made redundant found new jobs, some became unemployed, while others withdrew from the labour market; but

⁷ Such workers were paid "lay-off wages", which were below the working wage yet higher than unemployment benefits. They retained their social security link with their original workplace and thus enjoyed relatively better medical insurance than that available to the unemployed.

Figure 8. Ratio of wages to total income of urban residents, 1978–2009 (percentages)



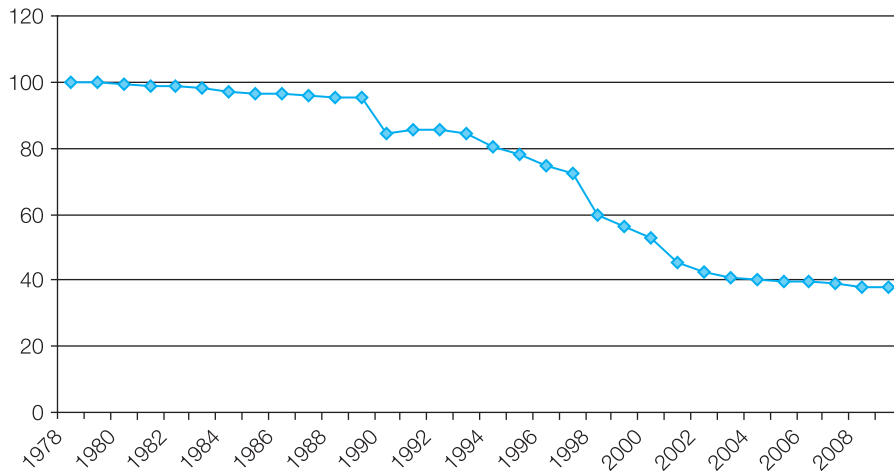
Sources: *China Statistical Yearbook 2010*, *China Statistical Abstract 2010*, National Bureau of Statistics (2010a), and authors' calculations.

many found work in the informal economy. Furthermore, wages were allowed to be effectively set by the market. According to Chen, Wan and Lu (2010), factors such as education, occupation, region and industry (work unit) now have a strong impact on wage levels; and the impact of education on urban inequality has become increasingly significant, indicating that the urban labour market is functioning better. At this stage, labour market reform has thus resulted in a more liberalized urban labour market with structural adjustment mainly taking the form of differentiation by employment status.

Figure 8 plots the change in the structure of urban income: the ratio of wages to the total income of urban residents has declined consistently since 1978, i.e. income from non-wage sources accounts for an ever-larger proportion of total income. Along with the diversification of income sources, one of the factors that have contributed to this trend has been the informalization of employment. Figure 9 depicts the declining ratio of “urban paid employees” to total urban employment, especially since 1996.⁸ This suggests that as labour market reform went deeper, employment became increasingly informal. Figure 10 maps changes in the structure of urban employment according to the ownership type of employing enterprises over the period 1978–2009. The shares of employment in SOEs and collective-owned enterprises (COEs) declined, while employment in enterprises under other forms of ownership increased significantly, especially after the mid-1990s.

⁸ “Urban paid employees” refers to workers recorded in the *China Statistical Yearbook*, i.e. those in formal wage employment. However, in urban China there are also self-employed workers and workers in informal employment. We use this ratio to capture the share of formal employment in total employment.

Figure 9. Ratio of urban paid employees to total urban employment, 1978–2009 (percentages)



Sources: *China Statistical Yearbook 2010*, National Bureau of Statistics (2010a), and authors' calculations.

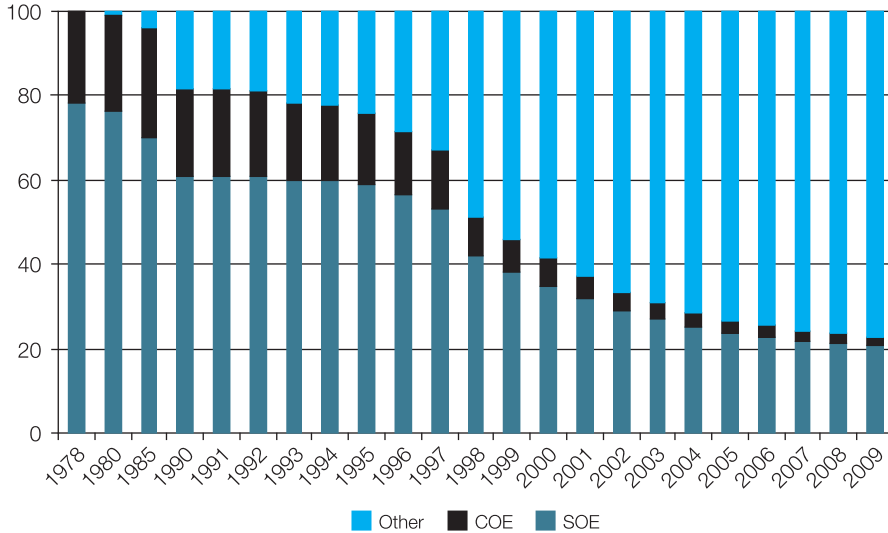
The registered urban unemployment rate also rose after 1997; the increase was especially rapid between 2001 and 2003 (figure 11).⁹ The tendency of the labour force participation rate to fall is illustrated in figure 12. The declining labour force participation rate suggests that the reform-driven adjustment of employment structure caused an increasing number of people to leave the labour market.¹⁰ Indeed, the pace of such employment restructuring clearly accelerated after 1997, leading to profound changes in employment and income structures.

In addition to changing workers' employment status, labour market reform in the mid-1990s contributed to growing income inequality between city dwellers, with inter-industry wage inequality increasing as well. The wage ratio of the industry with the highest average wage to the industry with the lowest was merely 1.66 in 1978; but it increased to 2.26 in 1997 and to 4.77 in 2008 (figure 13). Similarly, the Gini coefficient across industries rose from 0.06 in 1978 to 0.10 in 1997 and to 0.15 in 2008. The year 1996 was indeed a turning point for

⁹ In fact, China's urban registered unemployment rate is criticized by researchers as an inadequate indicator suffering from three problems. First, it measures *registered* unemployment, which is different from the more international measure of *surveyed* unemployment rate. Second, it takes into account only officially registered urban residents, thus excluding the "floating" rural population having migrated to the cities. Third, and most important, before the unification of the dual employment systems in the state and the private sectors in 2000–01, the rate of unemployment did not take into consideration "laid-off workers" (who were in effect unemployed and at one point actually outnumbered the unemployed). In other words, this indicator without doubt substantially underestimated the actual unemployment rate in urban China in the 1990s.

¹⁰ Although there were other reasons for the declining labour force participation rate, Cai and Wang (2004) also point out that the decline was partly a result of the fact that some "frustrated workers" left the labour market.

Figure 10. Urban employment structure by type of enterprise ownership, 1978–2009 (percentage share)



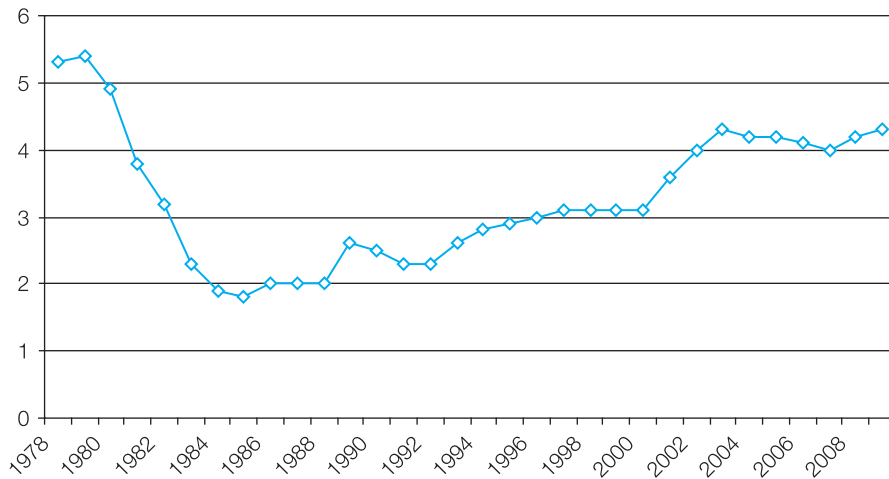
Sources: *China Statistical Yearbook 2010* and the National Bureau of Statistics.

inter-industry wage inequality, mostly because of drastic labour market reform; compared with monopolistic industries such as finance and insurance, the more competitive industries (including loss-making enterprises) were more profoundly affected by the reform of the mid-1990s, since only enterprises that had lost money for two years in succession were allowed to lay off employees (Chen, Wan and Lu, 2010).¹¹

Labour protection is inadequate under the current system in China. Although Chinese trade unions are nominally organizations through which workers can lawfully fight for their rights, in reality they are subordinate organizations established by the Communist Party and the Government inside public-sector enterprises and SOEs. In the initial stages of SOE reform in the mid-1990s, the trade union chairpersons in some enterprises were even granted incentives in the form of membership of enterprise management teams. As a result, workers in SOEs did not have an organization that could effectively represent them in wage negotiations. However, the weakened market position of workers created favourable conditions for the smooth progress of China's labour market reform: the maintenance of slow wage growth in the first stage of reform, and employment restructuring in the second. This too contributed to the widening of income inequality within cities.

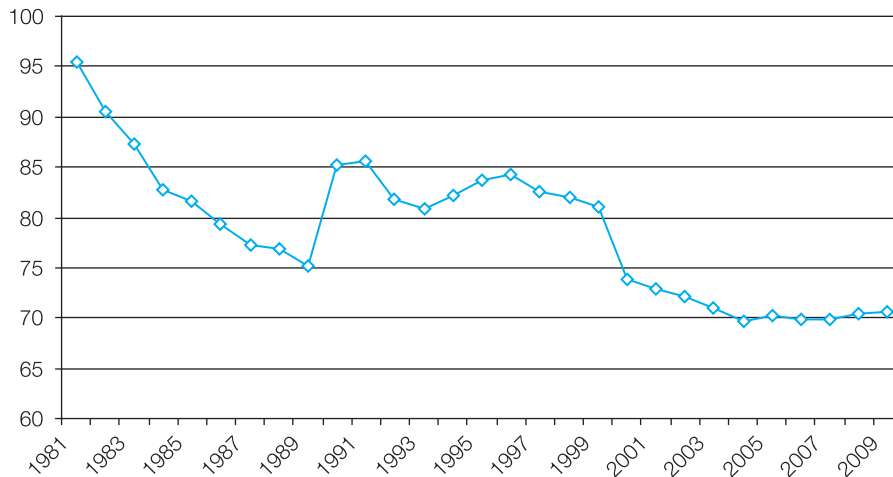
¹¹ Another reason for the accelerated widening of inter-industry wage inequality since the mid-1990s was that the large-scale inflow of migrant workers during that period had a greater impact on the more competitive industries. These industries employed most migrant workers because they had lower skill requirements and were easier for migrant workers to enter.

Figure 11. Urban registered unemployment rate, 1978–2009 (percentages)



Source: National Bureau of Statistics (2010b).

Figure 12. Urban labour force participation rate, 1981–2009 (percentages)

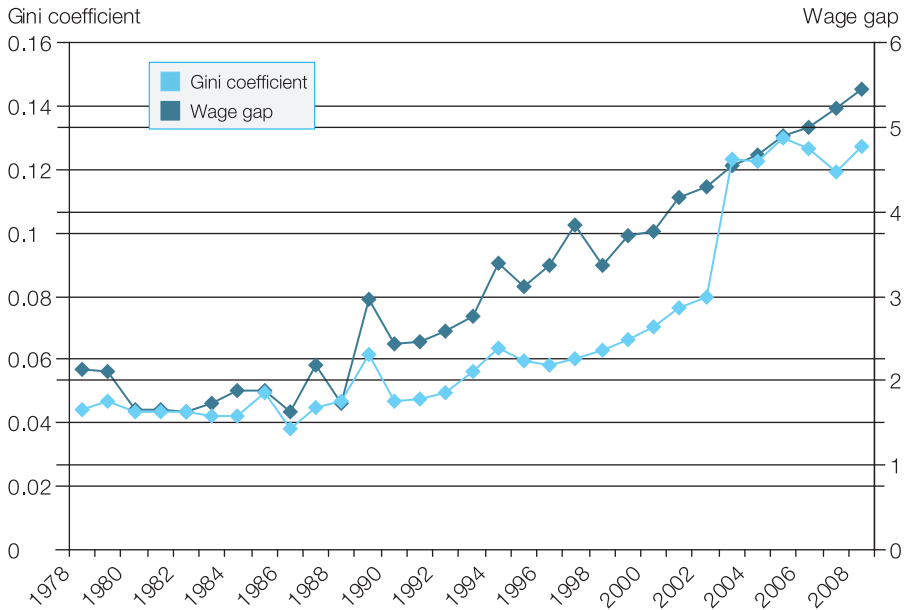


Note: The labour force participation rate = (employment + unemployment)/working-age population. The working-age population is the number of urban residents aged between 15 and 64 years. The sudden rise in 1990 was due to the change of statistical gauge.

Source: *China Statistical Yearbook 2010* and authors' calculations.

Inter-regional competition in China has also been an important factor in maintaining relatively slow wage growth and in the success of the country's economic reform (Qian and Weingast, 1997). When the central Government evaluates the performance of local governments, it ranks them in terms of relative performance, and local government officials are promoted on the basis of how

Figure 13. Inter-industry wage inequality in China, 1978–2008

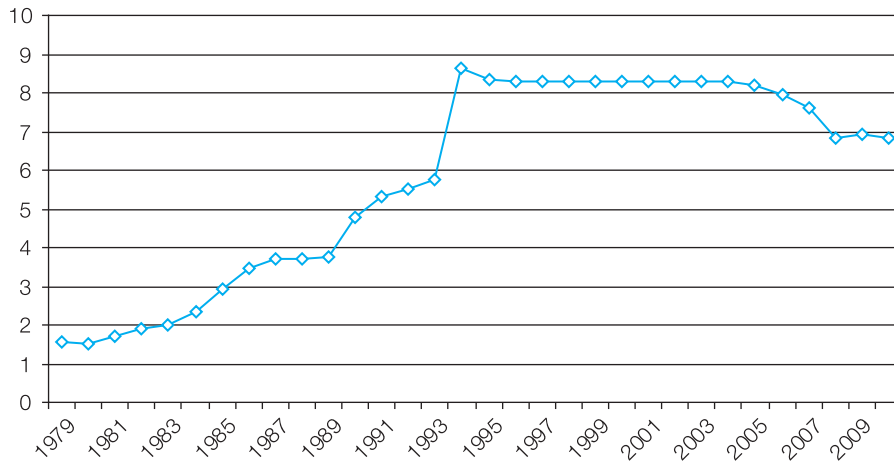


Sources: *China Statistical Yearbook* (various years), the National Bureau of Statistics, and authors' calculations.

well they do on local economic development, especially GDP growth, during their term in office (Li and Zhou, 2005). This system of evaluation based on GDP growth is the reason for the urban bias of local government policies, since the manufacturing and service industries located in towns and cities are those that contribute most to growth. Accordingly, local governments go all out to attract investment, and when there is conflict between workers and investors, the latter's interests are sometimes given priority, while workers' rights are largely overlooked. Furthermore, fiscal decentralization and regional competition are also responsible for the myopic attitude of local governments, whose officials report to their superiors instead of local communities, and place greater emphasis on policies that have an immediate impact on economic growth (e.g. attracting investments) rather than on policies bringing long-run benefits (e.g. protection of workers' rights and reduction of income disparities).

While rural-to-urban migration and labour market competition are the basic causes of low labour costs, the reform of China's exchange rate system in 1994 also contributed significantly to its export-led growth pattern. After 1978, when reform and the policy of "opening up" were initiated together with gradual marketization of the trade regime, the overvalued CNY came under greater pressure to depreciate. Despite several adjustments, however, the CNY continued to be overvalued, and there was a huge gap between the official exchange rate and the rate on the foreign exchange market. This dual system was abolished in 1994, and the official exchange rate was lowered considerably. From

Figure 14. Exchange rate (CNY/US\$1), 1979–2009



Note: The exchange rates for 1979–2007 are annual average middle rates. For 2008, the rate is the year-end exchange rate.

Source: Ministry of Commerce (2010).

then on, the CNY/US\$ exchange rate remained steady until 2005 (figure 14). The great devaluation of the CNY in 1994 marked the starting point of China's export-oriented strategy, and largely accounts for the tremendous increase in exports since that date.¹²

The consequences of labour market reform and income inequality

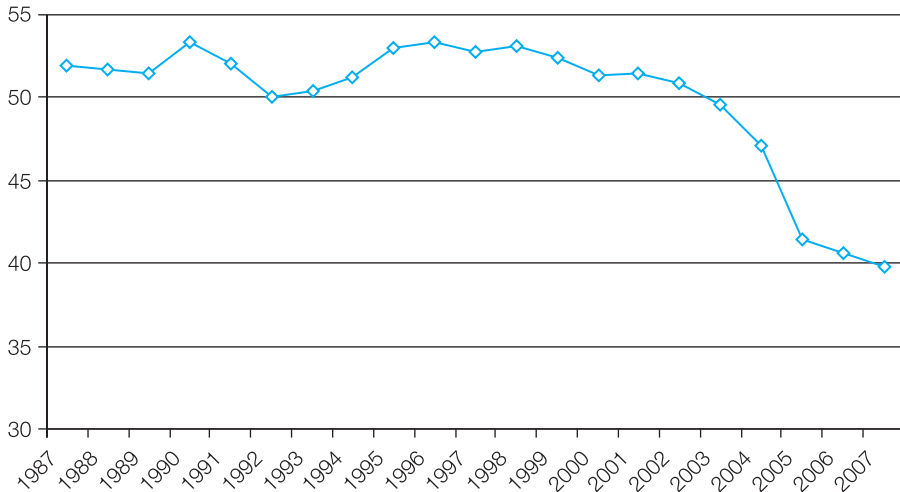
Labour market reform

Labour market reform sought to achieve a better allocation of labour and to improve incentives for the labour force. At the individual level, however, it brought changes in workers' employment status and income levels. Yet, the effect of labour market reform on incomes was different in each of the two stages of reform.

In its first stage (1986–96), labour market reform was perceptible mainly as a gradual adjustment in the structure of employment and incomes. Per capita production growth roughly kept pace with per capita wage growth. Thus, before the labour force underwent radical restructuring, the benefits of economic growth were shared among most people. At the same time, marketization reforms were increasing the rate of return to human capital, which had been distorted

¹² Since the change in the exchange rate in 1994 was a unification of the dual-track exchange rate, the depreciation of the CNY was effectively less than that shown in figure 14.

Figure 15. Labour's share of national income, 1987–2007 (percentages)



Notes: (1) Income-approach GDP consists of employees' compensation, net taxes on production, depreciation of fixed assets, and operating surplus. We define labour's share as the share of employees' compensation in income-approach GDP. Labour's share of national income is an average of each province's labour share, taking the proportion of each province's GDP in total GDP of all provinces as its weight.

(2) In China's statistics, income from self-employment is included in labour income, whereas in most other countries it is partly calculated as capital income. China's labour share in national income is thus overestimated compared with the international standard. The definition of income from self-employment was modified to comply with the international standard, and this explains why labour's share declined sharply in 2004.

Sources: *China Statistical Yearbook* (various years) and authors' calculations.

under the planned economy. Many empirical studies have found that the returns to education rose continuously during China's process of reform and opening up (Li and Ding, 2003; Heckman and Li, 2003; Zhang et al., 2005). In other words, the increase in income disparity that occurred during the first stage of labour market reform was mainly due to correction of previously distorted returns to human capital. In short, this stage of labour market reform caused people to "get rich together" – although some people got rich more quickly than others.

In the second, post-1996 stage of reform, employment restructuring became more pronounced, with greater employment-status differentiation, continuous decline in the labour force participation rate and rapidly rising unemployment. After 1997, the registered unemployment rate in China's urban areas increased continuously (figure 11). Alongside radical employment restructuring, income inequality in urban areas also widened, partly because of the income disparities between employed workers and those laid off, some of whom joined the ranks of the urban poor (Meng, Gregory and Wang, 2005).

As argued above, although the radical labour market changes of the mid-1990s successfully contributed to establishing a growth model based on low labour costs and high exports, labour's market position was weakened because of heightened competition for work. Since 1996, the widening of income inequality

has indeed been accompanied by a decline in labour's share of national income (see figure 15).¹³

China's labour market reform has taken place in an increasingly globalized and open environment, in which the pricing of capital and knowledge is determined at the global level. By contrast, China's workers, especially unskilled workers, cannot move freely across national borders, and they compete with each other only within the domestic market. Indeed, the country still has a substantial supply of unskilled labour, the pricing of which is left to the now highly competitive labour market. Even today – given the institutional background of labour market competition, weak trade unions and competition between local governments – workers' rights are still not well protected. The globalization process has brought about an unprecedented combination of capital and knowledge at the international level, yet workers remain at a comparative disadvantage. If the basic institutions of China's labour market do not change, it will be hard to relieve the increasing income disparities in the near future. Opening up the economy benefits urban areas more than rural areas, so income disparities between the two are bound to increase (Lu and Chen, 2006; Lu, Chen and Wan, 2005; Wan, Lu and Chen, 2006). Empirical studies of regional income disparities show that the opening-up process benefits coastal areas more than inland areas. Globalization, proxied by FDI and international trade, contributes nearly 20 per cent of inter-regional income inequality, and the strength of this contribution has increased constantly over time (Wan, Lu and Chen, 2007).

The effects of widening income inequality

China was so successful in promoting high economic growth that little attention was paid to the negative consequences of rising income inequality before the 2008 crisis. During the period 2003–07, China achieved annual growth rates exceeding 10 per cent for five consecutive years. However, when the developed countries lost their purchasing power because of the crisis, China's high growth could no longer be sustained for want of an alternative source of demand to match its production capacity.

Furthermore, increasing income disparity can harm an economy's growth potential both in the short term and in the long term. Generally speaking, there are four ways in which economic growth may be impeded by widening income inequality. First, because of imperfections in the credit market, widening income inequality can increase the number of low-income households facing credit constraints and thus lead to a decline in physical and human-capital investment by them (see Galor and Zeira, 1993; Fishman and Simhon, 2002). Second, in a democratic society, wider income inequality can cause more people

¹³ Labour's shares of national income before and after 2008 are not comparable because the economic crisis reduced the share of capital and government revenue (hence the omission of data for 2008–09 in figure 15).

to advocate redistributive policies, which require higher taxes – and higher taxes have negative effects on economic growth (see, in particular, Alesina and Rodrik, 1994; Persson and Tabellini, 1994; Bénabou, 1996). Third, greater income inequality can bring about social and political unrest, deteriorate the investment environment and so result in increased allocation of resources to property protection and a decline in the accumulation of productive physical capital (see Benhabib and Rustichini, 1996). Finally, widening income disparity increases the proportion of low-income families, which generally have more children and invest less in human capital, leading to a decline in educational attainment levels and thereby possibly jeopardizing economic growth (de la Croix and Doepke, 2004).

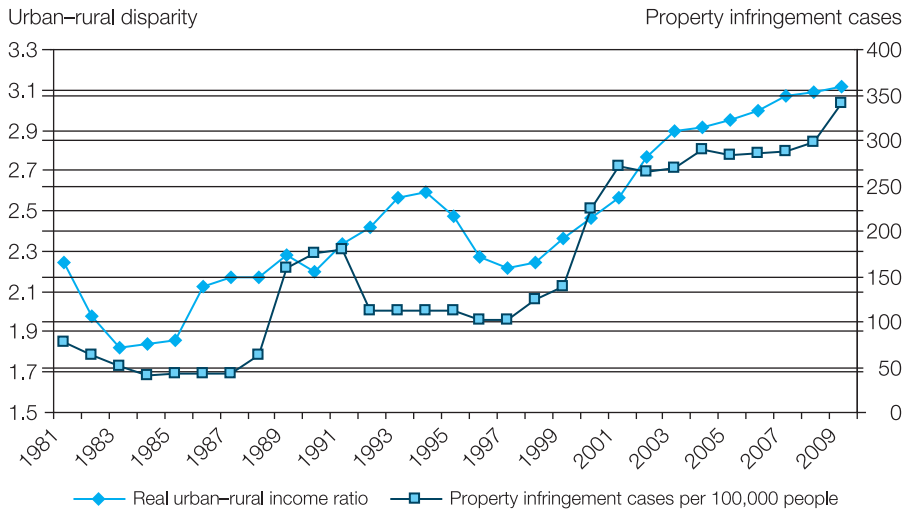
The findings of earlier studies on inequality and economic growth in China are insightful. Using village-level panel data compiled from a large-scale, detailed household survey, Benjamin, Brandt and Giles (2004) examine the relationship between inequality and economic growth, but their results provide no evidence suggesting that inequality impedes growth though a negative relationship between inequality and growth may emerge in the long run. A study by Wan, Lu and Chen (2006) finds that inequality in China is directly detrimental to investment, though it does slightly promote the accumulation of human capital. However, the negative effect of inequality on investment is found to outweigh its positive effect on education, making the cumulative effect of inequality on growth negative. It may be concluded from these authors' empirical results that if the urban–rural per capita income ratio is lowered by 1, the growth rate would be 3.8 percentage points higher.

Apart from its influence on economic growth, income disparity has other negative effects affecting development. As figure 16 suggests, inequality may be accompanied by social unrest and crime: the urban–rural per capita income ratio and the incidence of property infringement cases showed similar trends throughout the post-reform years.

The existing literature also confirms the relationship between poverty reduction and income inequality in China. Using data from Sichuan and Shaanxi provinces, Zhang, Huang and Rozelle (2003) find that changes in the poverty rate can mostly be explained by economic growth and that poverty alleviation policies in China have almost no effect. Yao, Zhang and Hanmer (2004) find that poverty can be significantly affected by inequality. They estimate that if the Gini coefficient for urban China increases by 10 per cent, urban poverty will rise by about 15 per cent using a high poverty line or about 30 per cent using a low poverty line. The corresponding increases in rural poverty are approximately 21 per cent and 35 per cent, respectively, implying that the poverty ratio is more sensitive to income distribution in rural areas than in urban areas.

Inequality may also have an impact on people's health. Using individual data from the China Health and Nutrition Survey, Li and Zhu (2006) discovered an inverted-U correlation between self-reported health status and income inequality. Their results also show that rising inequality can increase the probability of engaging in health-compromising behaviour such as smoking or alcohol

Figure 16. Income inequality and property infringement, 1981–2009



Note: Urban and rural incomes have been deflated by the urban and rural consumer price indices, respectively, except for 1981–84 and 1986–89 due to lack of indices for these years.

Sources: *China Statistical Yearbook 2010*, *China Statistical Abstract 2010*, and authors' calculations.

abuse. Feng and Yu (2007) also find an inverted-U correlation between income inequality and health in rural China.

Some interesting studies also relate happiness and public trust to income inequality. Using data from the Chinese Household Income Project Survey for 2002, Jiang, Lu and Sato (2008) examine the effect of identity-related inequality on individuals' self-reported state of happiness. Their empirical results show that migrants without urban household registration (*hukou*) suffer more from the average income gap between migrants and local urban residents than do native urban residents or people with acquired urban-resident status. Concerning public trust, Lu and Zhang (2007) show some evidence that income inequality at village level may be detrimental to public trust in rural China (though they express reservations about the robustness of this finding on methodological grounds).

Income mobility also falls when inequality increases. Using data from the China Health and Nutrition Survey, Ding and Wang (2008) measured the income mobility of households between 1989 and 2000. Their findings suggest that income mobility in China remained relatively high throughout that period, compared with income mobility in Belgium, Germany and the United States as reported in Van Kerm (2004). This may explain why stability in China and the United States – where individual income mobility is much higher than in the two European countries – is not undermined by serious social crises, although income inequalities in both countries are statistically high. However, if non-market (i.e. social or political) factors are embedded in the newly emerging market, income mobility in China may decline. This unfavourable influence has already been

observed and deserves close attention. Using data for the period 1989–97, Wang (2005) shows that overall income mobility helped to equalize income distribution among households throughout the period, though this effect weakened significantly in the 1990s, suggesting a decline in income mobility.

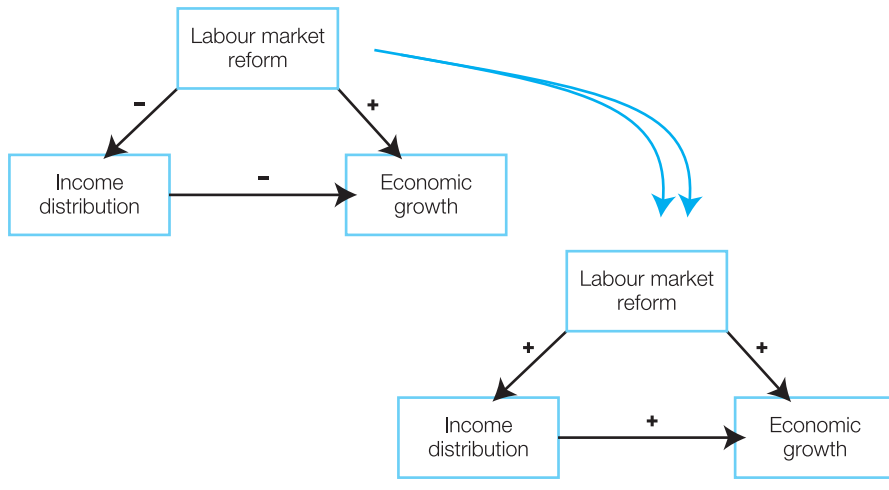
Concluding remarks

The shocks that the 2008 crisis has caused to the Chinese economy can largely be explained by its export-oriented strategy and high savings ratio. The economy's dependence on exports stems from its low labour costs, but the high savings ratio derives from widening income inequality. Both of these features result from the labour market reform which began in the 1980s and accelerated in the mid-1990s. Dividing labour market reform into two stages and taking the mass lay-offs of redundant SOE employees in 1996 as the turning point, China's economic growth pattern can also be roughly separated into two stages. In the first stage, from 1986 to 1996, although people's income sources diversified, economic growth generally benefited from market competition, while labour market reform was kept slow and gradual, so as to avoid social unrest. In the second stage, after 1996, employment restructuring was much more radical, and massive numbers of redundant workers were separated from the SOEs. Labour market reform further intensified competition and promoted efficiency, but it also widened income inequality. At the same time, rural-to-urban migration increased significantly, providing sufficient low-cost labour to labour-intensive industries from the mid-1990s onwards. In the process, labour's market power has been weakened, and China has joined the trend observed in many countries: labour's share of national income is declining. However, China's development pattern of high growth combined with widening inequality has been seriously challenged by the recent economic crisis.

Figure 17 illustrates two stages in the triangular relationship between labour market reform, income distribution and economic growth. China is currently in the first stage, in which labour market reform directly enhances economic growth while simultaneously exacerbating income inequality, with widening income disparity hindering economic growth. If the labour market reform strategy is wisely adjusted, income disparities can effectively be narrowed, and labour market reform will become fully beneficial to the ultimate objective of economic growth. Through such reform, the economic growth pattern can move from being dependent on low labour costs to promoting productivity and social harmony. From this perspective, the 2008 economic crisis and its unfolding consequences can be perceived as a stimulus for adjustment. As institutional forces aggravating income distribution are still at work, correction of the effects of the triangular relationship should thus remain a policy goal of the Chinese Government in its efforts to establish a harmonious society and sustain economic growth.

Against this background, the 2007 Employment Contract Law, which entered into force in 2008, just before China was hit by the global economic crisis, requires all employers to sign contracts of employment with their workers

Figure 17. Labour market reform, income distribution and economic growth



and provide them with social security coverage. This legislation has increased enterprises' labour costs to varying degrees and given rise to heated debate – not to mention issues of compliance.¹⁴ However, aside from the unfortunate timing of its entry into force, which put added pressure on China's enterprises (especially exporters) in the context of the crisis, the 2007 Employment Contract Law could be seen as a strong signal of institutional change within the broader framework of the country's development strategy, whereby economic growth may come to depend less on exports and more on domestic consumption. As argued throughout this article, this would clearly be beneficial to the sustainability of China's economic growth.

References

- Alesina, Alberto; Rodrik, Dani. 1994. "Distributive politics and economic growth", in *Quarterly Journal of Economics*, Vol. 109, No. 2, pp. 465–490.
- Bénabou, Roland. 1996. "Inequality and growth", in Ben S. Bernanke and Julio J. Rotemberg (eds): *NBER Macroeconomics Annual 1996*, Volume 11. Boston, MA, MIT Press, pp. 11–92.
- Benhabib, Jess; Rustichini, Aldo. 1996. "Social conflict and growth", in *Journal of Economic Growth*, Vol. 1, No. 1, pp. 125–142.
- Benjamin, Dwayne; Brandt, Loren; Giles, John. 2004. *Inequality and growth in rural China: Does higher inequality impede growth?* IZA Discussion Paper No. 2344. Bonn, IZA/Institute for the Study of Labor. Available at: http://homes.chass.utoronto.ca/~brandt/recentpapers/IZA_BBG.pdf [accessed 17 May 2011].
- Cai, Fang; Wang, Meiyang. 2004. "Zhongguo Chengzhen Laodong Canyuli de Bianhua jiqi Zhengce Hanyi" (Changing labour force participation in urban China and its implications), in *Zhongguo Shehui Kexue* (Social Sciences in China), No. 4, pp. 68–79.

¹⁴ See, for example, Zhikai Wang: "Social security for China's migrant workers", in this issue of the *International Labour Review*.

- Chen, Binkai; Lu, Ming; Zhong, Ninghua. 2010. "Huji Zhiyue xia de Jumin Xiaofei" (Household consumption constrained by *Hukou* system), in *Jingji Yanjiu* (Economic Research Journal), *Xiaofei Jinrong Zhuanji* (Special Issue on Consumer Finance), pp. 62–71.
- Chen, Zhao; Wan, Guanghua; Lu, Ming. 2010. "Hangyejian Bupingdeng: Riyi Zhongyao de Chengzhen Shouruchaju Chengyin – Jiyu Huiguifangcheng de Fenjie" (Inter-industry wage differentials: An increasingly important contributor to urban China income inequality), in *Zhongguo Shehui Kexue* (Social Sciences in China), No. 3, pp. 65–76.
- China Daily*. 2009. "Should I stay or should I go". 11 Feb., p. 7.
- de La Croix, David; Doepke, Matthias. 2004. "Inequality and growth: Why differential fertility matters", in *American Economic Review*, Vol. 93, No. 4, pp. 1091–1113.
- Ding, Ning; Wang, Yougui. 2008. "Household income mobility in China and its decomposition", in *China Economic Review*, Vol. 19, No. 3, pp. 373–380.
- The Economist*. 2007. "China's economy: How fit is the panda?", in Vol. 384, No. 8548 (29 Sep.–5 Oct.).
- Feng, Jin; Yu, Yangyang. 2007. "Zhongguo Nongcun de Shouru Chaju yu Jiankang" (Income inequality and health in rural China), in *Jingji Yanjiu* (Economic Research Journal), No. 1, pp. 79–88 [with English abstract available at: http://en.cnki.com.cn/Article_en/CJFDTOTAL-JYJ200701006.htm, accessed 17 May 2011].
- Fishman, Arthur; Simhon, Ari. 2002. "The division of labor, inequality and growth", in *Journal of Economic Growth*, Vol. 7, No. 2, pp. 117–136.
- Galor, Oded; Zeira, Joseph. 1993. "Income distribution and macroeconomics", in *Review of Economic Studies*, Vol. 60, No. 1 (Jan.), pp. 35–52.
- Heckman, James J; Li, Xuesong. 2003. *Selection bias, comparative advantage and heterogeneous returns to education: Evidence from Chinese in 2000*. NBER Working Paper No. 9877. Cambridge, MA, National Bureau of Economic Research. [Chinese version published in *Jingji Yanjiu* (Economic Research Journal), 2004, No. 4, pp. 91–99.]
- Jiang, Shiqing; Lu, Ming; Sato, Hiroshi. 2008. *Happiness in the dual society of urban China: Hukou identity, horizontal inequality and heterogeneous reference*. LICOS Discussion Paper Series No. 223/2008. Leuven, Katholieke Universiteit. Available at: <http://www.econ.kuleuven.ac.be/licos/DP/DP2008/DP223.pdf> [accessed 17 May 2011].
- Lewis, W. Arthur. 1954. "Economic development with unlimited supplies of labour", in *The Manchester School*, Vol. 22, No. 2, pp. 139–191.
- Li, Hongbin; Zhou, Li-An. 2005. "Political turnover and economic performance: The incentive role of personnel control in China", in *Journal of Public Economics*, Vol. 89, No. 9–10, pp. 1743–1762.
- ; Zhu, Yi. 2006. "Income, income inequality and health: Evidence from China", in *Journal of Comparative Economics*, Vol. 34, No. 4, pp. 668–693.
- Li, Shi. 2008. "Suoxiao Shouruchaju Xu Pochu Bumen Longduan" (Reducing income inequality requires abolition of sect monopoly), in *Liaowang Dongfang Zhoukan* (Oriental Outlook), 24 Nov., pp. 28–29.
- ; Ding, Sai. 2003. "Zhongguo Chengzhen Jiaoyu Shouyilü de Changqi Biandong Qushi" (Long-term change in private returns to education in urban China), in *Zhongguo Shehui Kexue* (Social Sciences in China), No. 6, pp. 58–72.
- Liu, Xuejun; Zhao, Yaohui. 2009. "Laodongli Liudong dui Chengshi Laodongli Shichang de Yingxiang" (The effects of labour migration on the urban labour market), in *Jingjixue Jikan* (China Economic Quarterly), No. 2, pp. 693–710.
- Lu, Ming; Chen, Zhao. 2006. "Urbanization, urban-biased policies and urban–rural inequality in China, 1987–2001", in *Chinese Economy*, Vol. 39, No. 3 (May–June), pp. 42–63. [Earlier Chinese version published in *Jingji Yanjiu* (Economic Research Journal), 2004, No. 6, pp. 50–58.]
- ; —; Wan, Guanghua. 2005. "Equality for the sake of growth: The nexus of inequality, investment, education and growth in China", in *Jingji Yanjiu* (Economic Research Journal), No. 12, pp. 4–14 [with English abstract available at: http://en.cnki.com.cn/Article_en/CJFDTOTAL-JYJ200512001.htm, accessed 17 May 2011].

- ; Gao, Hong. 2009. *When globalization meets urbanization: Labor market reform, income inequality, and economic growth in the People's Republic of China*. ADBI Working Paper No. 162. Tokyo, Asian Development Bank Institute.
- ; Zhang, Shuang. 2007. *Leaving the land, but not their hometown? Public trust and labor migration in rural China*. Shanghai, Fudan University. Available at: <http://www.cerdi.org/uploads/sfCmsContent/html/203/MingLu.pdf> [accessed 1 June 2011]. Chinese version published in *Shijie Jingji Wenhui* (World Economic Papers), 2008, No. 4, pp. 77–87.
- Meng, Xin; Kidd, Michael P. 1997. “Labor market reform and the changing structure of wage determination in China’s state sector during the 1980s”, in *Journal of Comparative Economics*, Vol. 25, No. 3, pp. 403–421.
- ; Gregory, Robert; Wang, Youjuan. 2005. “Poverty, inequality, and growth in urban China, 1986–2000”, in *Journal of Comparative Economics*, Vol. 33, No. 4, pp. 710–729.
- Ministry of Commerce. 2010. *China Commerce Yearbook 2010*. Beijing, China Commerce and Trade Press. Available at: http://www.yearbook.org.cn/english/yearbook_view/2010/2010contents.htm [accessed 17 May 2011].
- Mundell, Robert. 1962. “The appropriate use of monetary and fiscal policy for internal and external stability”, in *IMF Staff Papers*, Vol. 9, No. 1 (Mar.), pp. 70–79.
- National Bureau of Statistics. 2010a. *China Labour Statistical Yearbook 2010*. Beijing, China Statistics Press.
- .2010b. *China Population and Employment Statistical Yearbook 2010*. Beijing, China Statistics Press.
- . Various years. *China Statistical Yearbook*. Beijing, China Statistics Press.
- . Various years. *China Statistical Abstract*. Beijing, China Statistics Press.
- Persson, Torsten; Tabellini, Guido. 1994. “Is inequality harmful for growth? Theory and evidence”, in *American Economic Review*, Vol. 84, No. 3, pp. 600–621.
- Qian, Yingyi; Weingast, Berry R. 1997. “Federalism as a commitment to preserving market incentives”, in *Journal of Economic Perspectives*, Vol. 11, No. 4, pp. 83–92.
- Ravallion, Martin. 1998. “Does aggregation hide the harmful effects of inequality on growth?”, in *Economics Letters*, Vol. 61, No. 1, pp. 73–77.
- ; Chen, Shaohua. 2007. “China’s (uneven) progress against poverty”, in *Journal of Development Economics*, Vol. 82, No. 1, pp. 1–42.
- Setser, Brad; Pandey, Arpana. 2009. *China’s \$1.7 trillion bet: China’s external portfolio and dollar reserves*. CFR Working Paper. New York, NY, Council on Foreign Relations. Available at: http://www.cfr.org/content/publications/attachments/CGS_WorkingPaper_6_China.pdf [accessed 29 Mar. 2011].
- Stevenson, Cliff. 2007a. *Global Trade Protection Report 2007 – Data and analysis: A review of global trade protection activity (anti-dumping, countervailing duty and safeguards) covering the whole of 2006*. Available at: [http://www.antidumpingpublishing.com/uploaded/documents/CSDocuments/GTP%202007%20\(amended\).pdf](http://www.antidumpingpublishing.com/uploaded/documents/CSDocuments/GTP%202007%20(amended).pdf) [accessed 16 May 2011].
- .2007b. *Global Trade Protection Report 2007 – Update 18 October 2007: A review of global trade protection activity (anti-dumping, countervailing duty and safeguards) for the first six months of 2007*. Available at: [http://www.antidumpingpublishing.com/uploaded/documents/CSDocuments/GTP%202007%20\(update%20Oct%202007\).pdf](http://www.antidumpingpublishing.com/uploaded/documents/CSDocuments/GTP%202007%20(update%20Oct%202007).pdf) [accessed 16 May 2011].
- Van Kerm, Philippe. 2004. “What lies behind income mobility? Reranking and distributional change in Belgium, western Germany and the USA”, in *Economica*, Vol. 71, No. 282, pp. 223–239.
- Wan, Guanghua; Lu, Ming; Chen, Zhao. 2007. “Globalization and regional income inequality: Empirical evidence from within China”, in *Review of Income and Wealth*, Vol. 53, No. 1, pp. 35–59.
- ; —; — .2006. “The inequality–growth nexus in the short and long run: Empirical evidence from China”, in *Journal of Comparative Economics*, Vol. 34, No. 4, pp. 654–667.
- Wang, Haigang. 2005. “Zhongguo Jumin Jiating de Shouru Biantong jiqi dui Changqi Pingdeng de Yingxiang” (Household income mobility and its equalizing effect on long-term income in China), in *Jingji Yanjiu* (Economic Research Journal), No. 1, pp. 56–66.

- Yang, Rudai; Zhu, Shi'e. 2007. "Gongping yu Xiaolü Buke Jiande ma? Jiyu Jumin Bianji Xiaofei Qinxiang de Yanjiu" (Can equity and efficiency coexist: Study on the marginal propensity to consume in China), in *Jingji Yanjiu* (Economic Research Journal), No. 12, pp. 46–58.
- Yao, Shujie; Zhang, Zongyi; Hanmer, Lucia. 2004. "Growing inequality and poverty in China", in *China Economic Review*, Vol. 15, No. 2, pp. 145–163.
- Yue, Changjun; Hua, Ping. 2002. "Does comparative advantage explain export patterns in China?", in *China Economic Review*, Vol. 13, No. 2–3, pp. 276–296.
- Zhang, Junsen; Zhao, Yaohui; Park, Albert; Song, Xiaoqing. 2005. "Economic returns to schooling in urban China, 1988 to 2001", in *Journal of Comparative Economics*, Vol. 33, No. 4, pp. 730–752.
- Zhang, Linxiu; Huang, Jikun; Rozelle, Scott. 2003. "China's war on poverty: Assessing targeting and the growth impacts of poverty programs", in *Journal of Chinese Economic and Business Studies*, Vol. 1, No. 3, pp. 301–317.