

Weathering a Storm

Survey-Based Perspectives on Employment in China in the Aftermath of the Global Financial Crisis

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Abstract

Evidence from a range of different sources suggests that Chinese workers lost 20–36 million jobs because of the global financial crisis. Most of these layoffs affected migrant workers, who have typically lacked employment protection, tend to be concentrated in export-oriented sectors, and were among the easiest to dismiss when the crisis hit.

Although it was severe, the employment shock was short-lived. By mid-2009, the macroeconomic stimulus and other interventions had succeeded in boosting demand for migrant labor. By early 2010, abundant

evidence pointed to scarcity in China's labor market, as labor demand was once again leading to brisk growth in wages.

The paper reviews different available sources of evidence for the effects of the crisis, and notes the biases associated with alternative ex post efforts to measure the employment effects of the crisis. In particular, the paper highlights the usefulness of household surveys with employment histories relative to surveys based on sampling through firms.

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Weathering a Storm: Survey-Based Perspectives on Employment in China in the Aftermath of the Global Financial Crisis

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The global financial crisis, well under way by the third quarter of 2008, did not originate in the developing world. It sparked immediate concerns, however, that its effects would be felt widely, particularly in those economies in which a substantial share of the workforce was engaged in export-oriented activities. China met the onset of the crisis with a strong fiscal stimulus program, coupled with active labor market policies, aimed both at providing training to laid-off migrant workers and at supporting the medium- and small-scale enterprises that were more exposed to shocks from the crisis. This paper reviews evidence on the incidence of shocks related to the financial crisis in China, documents employment effects, and presents evidence of the recovery in 2009.

1. Analyzing the Effects of the Crisis

The lack of publicly available and nationally representative firm, labor force, and household surveys complicates an analysis of the precise effects of the financial crisis on China. Incidental surveys—such as a firm survey carried out by the People’s Bank of China, a rural household survey conducted by China Center for Agricultural Policy (CCAP) at the Chinese Academy of Sciences, and the China Urban Labor Survey (CULS) conducted by the Chinese Academy of Social Sciences—may nonetheless be used in conjunction with information from national surveys and published research to tease out the employment effects of the crisis and recovery. This paper reviews critically the evidence from these sources, with an eye toward highlighting data and measurement issues, while documenting a consistent narrative of crisis and recovery in China.

According to evidence from multiple sources, migrant workers were exposed more than other workers to the financial crisis. Given that migrant workers typically lack the formal employment contracts enjoyed by urban workers, they were easier for firms to dismiss, providing flexibility to employers who needed to reduce costs in the face of crisis-related shocks. As migrants also typically lack the benefits that urban workers have, they were in a much more precarious position with little access to formal safety nets protecting them against unemployment. The recognition of

this vulnerability provided an extra sense of urgency for development of a macroeconomic stimulus package that would facilitate reemployment of laid-off workers. The widespread reductions in employment that were evident by January 2009 could have placed existing institutions under considerable stress.

By the end of 2009, data from both firm and household surveys show that China had weathered the storm quite well. In spite of the ongoing slowdown elsewhere in the world, the labor market was tightening in China. Real wages of migrant workers continued to increase through the crisis, even as a significant percentage had suffered layoffs, and by late 2009 laid-off migrants looking for jobs were finding them.

The paper proceeds as follows. The next section locates the shock of the financial crisis in the context of other adjustments already under way in the Chinese economy and documents the effects of the shock on the export sector. The following section reviews evidence on the employment effects of the crisis from firm and household surveys. The paper then discusses the government's fiscal stimulus and active labor market programs and reviews evidence of the effect of the crisis and subsequent recovery on wages and incomes. The final section offers some conclusions.

2. The Trajectory of China's Economic Growth and the Global Financial Crisis

Between 2001 and 2007, the world economy experienced steady growth (Figure 1a). China and India consistently displayed growth rates of 4–12 percent, while other major economies registered healthy annual growth rates of 2 percent or more. China's growth rate was in fact so high by 2007 that in early 2008 the government was in the process of trying to cool off the economy and make growth more equitable. The government and the central bank had introduced contractionary macroeconomic policies in 2007, aiming to slow growth, and in January 2008 the new Labor Contract Law was put in place to provide employment protection to workers along with mandated social insurance contributions from employers.¹ The timing of these two events

nearly overlapped with the subsequent crisis and thus complicates efforts to link layoffs directly to the financial crisis. Nonetheless, evidence from quarterly data suggests that shocks associated with the crisis, which hit in the third quarter of 2008, may have had a stronger effect on gross domestic product (GDP) and employment than earlier policy shocks.

The events of September 2008 raised concerns that China would face a sharp drop in GDP. The global financial crisis changed the growth trajectories of all major world economies and plunged Japan, the United Kingdom, and the United States into deep recession (Figure 1b). By the first quarter of 2009, annual growth rates were negative in major developed economies; and while the growth rates of China and India were still positive, they dropped steeply in both countries. In comparison to other major economies of the world, China experienced one of the largest changes in annual growth rates from 2007 to 2008. From the first and second quarter of 2008 to the fourth quarter of 2008 and the first quarter of 2009, China's annualized quarterly growth rate fell from more than 10 percent to 6 percent (Figure 1b).

Responsibility for the slowdown in China's GDP lies squarely with the global financial crisis, given that GDP growth declined well *after* contractionary domestic monetary and employment policies were implemented and that the timing was consistent with a sharp drop in export demand: the negative export demand shock contributed more to the contraction in aggregate demand that slowed China's economy. Customs data on China provides useful evidence on the scale of the shock to its exports. The aggregate decline in trade volume shown in Figure 2 is driven by decreased exports to the European Union and the United States of 22.1 and 17.1 percent, respectively, over the same periods in the previous year. Given these sharp declines, it was apparent that China's economy would be hit hard by the decline in exports if no alternative sources of demand for goods and services emerged.

As shown in Figure 3, the sharpest shock to China's economy occurred in the manufacturing sector, which is in the secondary sector in China's industry classification system (the primary sector comprises agriculture and mining, and the tertiary sector includes services and trade).

While all three sectors experienced declines in their high rates of growth after mid-2007, manufacturing, where exports are concentrated, experienced a sharp drop at the time of the crisis, and some of the effects of this shock likely spilled over into the services sector as well.

3. The Financial Crisis and Shocks to Employment

Anecdotal reports started showing up in both the Chinese and the international press that sparked early concern that the global financial crisis would have a serious impact on employment. For example, in October 2008, the owner of a textile factory in Shaoxing, a city 100 miles from Shanghai, fled in the middle of the night and left 4,000 workers unemployed and US\$200 million in unpaid bills. When employees showed up to work in the morning and found the factory gates bolted, they erupted in protest (Xiao 2008). In addition, there was frequent documentation of laid-off migrant workers returning home to villages early for the spring festival in 2009 (see, for example, Johnson and Batson 2009) and in some cases creating conflict with those renting their land (Yang 2008).

Surveying firms, households, or individuals yields some perspectives on the employment impact of the crisis. Surveys at each level have both advantages and disadvantages. A firm survey that enumerates employment and vacancies is more likely to capture changes in demand for labor at the firm level. Since firms in export sectors can then be separated from other types of firms, this approach promises to provide a direct link to export shocks. At the same time, however, firm surveys typically oversample larger firms and may thus miss the effect of shocks on smaller firms, which are less likely to be in the formal sector. In addition, firm surveys—especially if they are repeated cross-sectional surveys—may understate the effects of labor market shocks because they do not capture shocks to employment resulting from firm bankruptcies. Alternatively, firm surveys may overstate labor market shocks if all firm attrition from a panel survey is attributed to bankruptcy or restructuring as a result of the crisis.

3A. Evidence from Firm Surveys

Since 2001, the Ministry of Human Resources and Social Security (formerly Ministry of Labor) has maintained a labor force observation network, which compiles information from both firm and labor force surveys conducted in 159 cities.² From this data source, information on vacancies and job seekers may be combined to provide an indication of changing demand for labor. As the data presented in Figure 4, show, the demand for labor dropped sharply, falling from 0.97 to 0.85 from the third to the fourth quarter of 2008. This finding is consistent with information from an Internet-based recruitment company, which reported that the growth in vacancies fell off significantly between the third quarter of 2008 and the first quarter of 2009 (Zeng, Cui, and Ding 2009).

The ministry also reports this statistic by gender, based on assumptions about the gender composition of occupations and jobs typically held by men and women. According to variation in this statistic, fewer men than women are typically available for each vacancy: the ratio of vacancies to job seekers is always higher in male-dominated occupations than in female-dominated occupations. With the onset of the financial crisis, however, the percentage drop in vacancies per job seeker was steeper for men than for women (Figure 5), suggesting that the shock hit the demand for male labor harder.

The labor market observation data have two shortcomings: first, the firm survey over-samples firms and vacancies in the formal sector, and the associated labor force survey oversamples long-term urban residents. Second, because the firm surveys are representative of enterprises operating at each period of time, they miss those shocks to employment that result from firm bankruptcy.

Interesting insights on the relationship among firm survival, migrant employment, and the financial crisis are provided by Kong, Meng, and Zhang (2009). This study makes use of a household sampling frame of migrants that was constructed by first sampling enterprises where migrants work and then randomly sampling migrants.³ A first census of 489 blocks in 15 cities was conducted in 2007, and then the first wave of the survey was conducted in the spring of

2008. In October 2008, December 2008, and February 2009, tracking protocols required the team to re-contact all respondents ahead of the spring 2009 follow-up survey. In the process of tracking migrants through firms, the team found that 9 percent of workplaces had closed in the 14 months following the November–December 2007 census; by matching workplaces to migrants they had employed, the team estimated that 13 percent of migrants in the 15 cities surveyed were affected by post-crisis shutdowns. If this lay-off rate were applied to an estimated 142 million long-term migrant workers in 2008, perhaps some 18.5 million migrant workers could have lost their jobs as a result of enterprise closings during the crisis period.

Not all cities were affected equally. Kong, Meng, and Zhang (2009) found that 34 percent of migrants in the export-oriented city of Dongguan (in Guangdong province) would have lost employment through enterprise closings. Across industry sectors, the study found that manufacturing (which is export oriented) was hit hard, but so too were construction and services. With large-scale layoffs in export-oriented sectors, however, it would not be surprising to find that sectors specializing in nontraded goods (construction, real estate, and services, for example) would be affected as well.

However, the Kong, Meng, and Zhang (2009) study has limitations that should lead to a healthy skepticism toward the results. First, the authors are unable to account for layoffs from firms that did not close. Second, the study makes a strong counterfactual assumption that no firms would close in the absence of the financial crisis (as a result of adjustments associated with the 2008 Labor Contract Law, for example, or the credit tightening associated with macroeconomic policies initiated in 2007). In practice, even a booming economy will have some failures, and some firms may be lost from the sample if they move locations to expand or move as a result of urban redevelopment initiatives. Furthermore, the authors do not appear to account for new firm creation or the ability of migrant workers to shift immediately from closed workplaces to other jobs. All of these problems may lead to an overestimation of the contribution to layoffs from firm closings as a result of the crisis.

An alternative to the firm closure approach followed by Kong, Meng, and Zhang (2009) is to examine directly the demand for labor among firms. This approach was followed in the China National Firm Survey (CNFS 2009) conducted by the People's Bank of China in October 2009.⁴ The CNFS is a representative sample of over 2,000 manufacturing firms from eight provinces: four coastal provinces (Guangdong, Jiangsu, Shandong, and Zhejiang), one northeast province (Jilin), one central province (Hubei), one northwest province (Shaanxi), and one southwest province (Sichuan). The sampling frame is certainly skewed toward larger and well-established firms: it comprises all firms operating in August 2009 that ever had a credit relationship with any financial institution. Still, it provides interesting evidence of the impact of the financial crisis on the formal sector.

The survey collected data on six-month intervals beginning in 2007, allowing the researcher to examine changes in employment among firms that had survived the financial crisis through October 2009. Table 1 shows the percentage changes in employment over the previous six months. Between January and June 2008, and in the wake of macroeconomic adjustment and implementation of the Labor Contract Law, employment grew by 3 percent. Behind this number, however, was a negative shock to employment in the state and collective sector that was more than offset by continuing increases in employment in other ownership sectors. By December 2008, overall employment in these firms had dropped a half-percentage point, but again the average obscures the sharper hit that exporters experienced. Exporting firms shed 1.9 percent of their employees, which implies a reduction in the growth rate of employment of 4.9 percentage points relative to the pre-crisis trend of 3 percent. Ownership sectors—the sector open to foreign investment, of which a significant share goes toward exports to developed economies—shed nearly 5 percent of their employees.

In a comparison of changes in the employment of migrants to changes in the employment of local residents in these enterprises, as Table 2 illustrates, migrants were more likely to suffer adverse employment shocks over the period of the crisis, particularly those employed in export-

oriented enterprises. Flexibility and adjustment within the labor market are also evident, as non-exporting firms actually continued to increase their employment of migrants even over the period June to December 2008, when China experienced the sharpest negative shock to aggregate demand.

As these data capture only the behavior of surviving firms and firms of sufficient scale to have formal transactions with financial institutions, they miss the effects of firm closure even as they pick up the differences in employment dynamics across exporters and non-exporters. Just as the surveys using firm data reveal the strong effect of the crisis on migrant workers, the use of survey data on rural households with information on migrant families provides a way to capture the employment effects on rural registered residents, who were most affected by crisis-related shocks. Evidence from rural household surveys is discussed below.

3B. The View from the Rural Household

Employers usually have much greater flexibility in ending employment relationships with migrant workers than with local workers. Migrants in China's cities and booming coastal areas typically do not have formal labor contracts and lack legal recourse to employment protection; and, when they lose a job, they frequently lack severance pay or unemployment benefits. The 2005 China Urban Labor Survey, for example, noted that 85.2 percent of migrants working in five large urban cities were in the informal sector. Even after excluding the self-employed among the informal sector, 54.7 percent of wage-earning employees lacked contracts. The Labor Contract Law and a tightening of the labor market helped lower these informality rates somewhat, so that by February 2010 only 40 percent of migrants were wage-earners working without contracts. However, empirical analysis using the CNFS data suggests that manufacturing firms in cities that implemented labor regulations more strictly tended to experience slower employment growth (Park, Giles, and Du 2011). Informal employment rates for local residents, by contrast, were under 25 percent.⁵

Several data sources based on representative surveys of rural households offer the most straightforward descriptive statistics on the effects of employment shocks on migrant workers.⁶ Indeed, rural-to-urban migrants in China rarely move to urban areas with their entire families, and thus members of the family (older parents, children, and sometimes spouses) are left behind in home villages. Since 2003, the two survey institutes conducting national rural household surveys—the National Bureau of Statistics (NBS) and the Ministry of Agriculture’s Research Center for the Rural Economy (RCRE)—have been fielding household surveys that included modules with detailed questions on the activities of migrant family members. Much of the empirically based Chinese-language literature detailing the effects of the crisis on migrants is based on these data sources. Unfortunately, these data are not readily available for public use.

Several papers written using the NBS or RCRE household surveys document the gross effect of the crisis on unemployment. Early in 2009, analysts using the NBS survey network estimated that 20 million migrant workers were laid off as a result of the crisis (Chen 2010) and, in March 2009, the NBS released a report estimating that 23 million migrant workers were out of work (NBS 2009). That number amounts to 16 percent of the long-term migrant workforce.⁷

Much analysis to date on the effects of the crisis on migrant workers focuses on job loss and does not examine the employment impact based on a reasonable counterfactual assumption of what employment would have been in the absence of the financial crisis. In addition, some of these studies focus on “gross impacts” and thus miss the reallocation of labor across sectors.⁸ A study by Huang et al. (2011) uses a panel survey, known as the China National Rural Survey (CNRS), collected by the authors to establish a counterfactual “business-as-usual” level of off-farm employment and then analyze the effect of the crisis on off-farm nonagricultural employment. Because the off-farm nonagricultural employment category treats migrants and non-migrant nonagricultural workers as employed in an integrated off-farm labor market, the net effects of the crisis relative to counterfactual levels of both off-farm employment and overall employment can be examined, including work in agriculture.

The CNRS data make use of annual retrospective employment histories dating to 2000, when the first round of the survey was implemented and of detailed monthly employment histories for the 24 months preceding 2009.⁹ Information on employment history was used to calculate the counterfactual level of employment for 2009. The research team used estimates of off-farm employment trends (based on data from 2005 through the second quarter of 2008) and monthly employment data from the 12 months before the crisis and annual 2005–07 growth rates. The results of the extrapolation exercise and actual off-farm employment rates are shown in Figure 6.¹⁰

Absent the financial crisis, Huang et al. (2011) argue that 57.8 percent of the rural labor force would have been working off-farm but that instead only 51 percent had off-farm employment. By April 2009, a gap of 6.8 percent had opened between the counterfactual and the actual share of the rural labor force working off-farm. At the national level, that percentage would imply 279 million rural residents were actually working in nonagricultural activities in September 2008, whereas, under the existing trends and seasonal adjustments, 301 million might have been expected to be working off-farm in April 2009. In fact, the analysis estimates that only 265 million rural individuals were working off-farm in April 2009, implying that the net effect was a loss of 36 million jobs. This number is consistent with a drop in nonagricultural employment of 12 percent or, in terms of the entire rural registered workforce, a decline of 6.8 percent in the ratio of business-as-usual to actual share of those working outside of agriculture.

The net impact, however, differs from the number of rural workers who were actually laid off. That number cannot be deduced from this net gap. A number of factors affect the gap between the business-as usual scenario in April 2009 and the actual level of employment at that time. First, the gap includes those who were laid off between October 2008 and April 2009 and did not find a job (*the long-term laid-off workers*). Second, the gap is also affected by the difference between the number of workers that were actually laid off between October 2008 and April 2009 and those that found a new job between October 2008 and April 2009 but who had not been

working off-farm in October 2008 (that is, the *rehires*). Third, despite the financial crisis a class of new workers was able to find employment between October 2008 and April 2009 (that is, they were not working in September 2008 but were working in April 2009: the *newcomers*). Finally, the business-as-usual prediction for April 2009 includes rural individuals that—absent the financial crisis—would have found a job off-farm between October 2008 and April 2009 but did not (*delayed entrants*). According to Huang et al. (2011), the number of long-term laid-offs (that is, rural individuals that were laid off after October 2008 and were still not working off-farm by April 2009) was 25 million, which was slightly larger than the number of newcomers (23 million).¹¹

4. Government Policies, the Recovery, and the Labor Market

Behind China's rapid recovery lay both an ambitious macroeconomic stimulus and a host of active labor market policies and expansions of the social safety net. In late 2008 and early 2009, the central government unveiled a Y4 trillion plan, equal to 13.3 percent of China's Y30 trillion GDP, to stimulate the slowing economy. The composition of the stimulus package is shown in Figure 7, with the largest share devoted to key infrastructure (38 percent) and investment in earthquake-affected areas (25 percent). The balance of the stimulus went to a combination of activities aimed at poverty relief, such as subsidized housing (10 percent), rural infrastructure (9 percent), and social development (4 percent) and to promote longer-term growth, including investments in innovation and economic restructuring (9 percent) and emission reductions and environmental protection (5 percent).

According to one source, evidence that the stimulus package ameliorated the negative employment consequences of the crisis was the shift in sectoral composition of the employment of migrant workers. From 2008 to 2009, the share of workers employed in manufacturing fell nearly 3 percent; the sector with the largest increase in share was construction (1.0 percent), with wholesale and retail trade (0.8 percent), transport (0.3 percent), hotels and catering (0.2 percent), and other sectors (0.6 percent) accounting for the rest of the increase. Note that since overall

employment increased in 2009, these changes in employment shares understate the actual percentage increases in job creation in these sectors.

The government also took several measures to reduce the employment shock associated with the crisis. Recognizing that small and medium enterprises were not well positioned to cope with crisis-related shocks, the government reduced the tax burden on those enterprises and provided other sources of support. In November 2008, the State Council issued an executive order facilitating extension of credit to small and medium enterprises; and in December 2008, the Ministry of Human Resources and Social Security implemented several measures to reduce burdens on enterprises, including: (1) allowing enterprises facing financial difficulties to delay payment of social security funds; (2) temporarily reducing mandated contributions to medical, work injury, and unemployment insurance; and (3) using unemployment funds to maintain employment levels in firms facing financial difficulties. By the government's own estimate, these three measures helped save 10 million jobs.¹²

Local governments also worked hard to convince enterprises in their jurisdiction to avoid shedding large numbers of workers. According to interviews by the authors with city labor bureau officials in Shanghai in early 2009, firms were offered various sources of support, including wage subsidies and suspension of tax payments, to encourage them to keep local residents employed. Interestingly, the officials were unconcerned about layoffs of migrant workers. These efforts by local governments, in addition to a strong stimulus and supportive national policies, likely mitigated the negative employment impacts of the crisis. Preventing firm employment reductions or outright failures reduced short-term pain but at the potential cost of reducing the creative destruction useful for enhancing competitiveness in the longer term. Implementation of the 2008 Labor Contract Law may also have been influenced by the economic crisis. Although, on average, neither firms nor workers reported that enforcement of the law was less strict after the crisis hit, analysis of the firm data finds that exporting firms subject to

negative demand shocks during the crisis reported less strict enforcement of labor regulations relative to other firms (Park, Giles, and Du 2011).

In addition, recognizing that migrant workers and new graduates may be hit hardest by layoffs and lack of employment opportunities in the wake of the crisis, the Ministry of Human Resources and Social Security expanded training programs to promote employment among these groups.¹³ Targeted recipients included employees of enterprises facing financial difficulties, returned rural migrant workers without employment, unemployed registered college graduates who were new market entrants, and unemployed rural migrant workers living in urban areas. Furthermore, in early February 2009 the Central Committee of the Communist Party issued a document promoting employment of migrant workers.¹⁴ Enterprises were encouraged to maintain migrant employment, and those enterprises facing difficulty were allowed to adopt reduced or flexible work hours and provided with subsidies for on-the-job training to maintain employment. Laid-off migrants who returned home were provided with subsidized credit, favorable tax treatment, and consultations to help with starting new businesses. Temporary income assistance through expansion of the rural minimum living standard support program (known as the *dibao*) also helped sustain migrants who returned home without jobs.

Unfortunately, neither active labor market programs nor interventions to support employment were implemented in a way that allowed proper evaluations of impact. Indeed, the only public documentary evidence on such programs, training interventions, and extensions of credit in the public domain is in the Ministry of Human Resources circulars directing local governments to implement such policies in a manner consistent with local conditions.

According to evidence from the rural household survey data, the robust recovery of labor demand following the stimulus was most important for the reemployment of rural registered workers who had lost jobs in the immediate wake of the crisis. Although the counterfactual gap in employment was still large in the first four months of 2009 (as shown in Figure 6), it was already beginning to narrow in percentage terms. By April 2009, Huang et al. (2011) estimate

that the gap between the business-as-usual off-farm employment share and the actual off-farm employment share was 6.8 percentage points, which means that it was affecting only 11.7 percent of those that would have been employed off-farm under the business-as-usual scenario as opposed to 12.5 percent in January. China's second quarter 2009 GDP figures showed that the growth rate had stopped declining and that growth was picking up again; similarly, rural off-farm employment was also showing the initial signs of recovery. In other words, China's off-farm labor market was already showing signs of recovery as early as the first and second quarters of 2009, when the global financial crisis was less than six months old.

As the economic recovery proceeded, national rural household surveys show that outmigration had picked up again by the end of 2009. According to the NBS rural household survey, 145 million migrant workers were employed outside their home villages for more than six months in 2009, which was a 2.6 percent increase over 2008 (NBS 2010). Estimates based on the RCRE household survey indicate that there were 147 million migrant workers by year end, or an increase of 6.8 percent over the previous year. As evident from Figures 4 and 5, the ratio of vacancy to job seeker also rose sharply between the second and third quarters of 2009, pointing toward an increase in labor demand relative to supply.

5. Wage Income in the Wake of the Financial Crisis

From annual survey data, it is apparent that incomes fell in China in early 2009 but recovered later. Descriptive evidence from the CNRS survey shows that many workers who did not lose their jobs experienced a drop in earnings. According to the CNRS, the monthly earnings of the typical unskilled worker (who worked off-farm in both 2008 and 2009) employed in 2008 and the first four months of 2009 fell by 10.5 percent in early 2009.

By the end of 2009, however, the economic recovery was evident in wages as well. The nationally representative NBS and RCRE household surveys and the PBC firm survey show that

the wages of employed migrants were rising again by the end of 2009. Trends in monthly wage income for all three data sources, shown in Figure 8, suggest that increases in the demand for labor were again driving up migrant wages by the end of 2009.

Evidence from the latest round of the China Urban Labor Survey, shown in Table 4, also indicates renewed upward pressure on wages in the labor market. For migrants employed in late 2009, neither working hours, nor monthly earnings, nor hourly earnings declined. Steady increases in both monthly and hourly earnings through February 2010 suggest that the labor market was tightening once again and that the slowdown and decline in earnings evident in the CNRS data were temporary.

6. Conclusions

This paper has examined evidence from firm and household surveys on the effects of the global financial crisis on employment in China. After highlighting descriptive statistics from firm surveys suggesting that most of the adjustment was borne by migrant workers, the paper reviewed rural household survey data to examine the net effect of the crisis on employment of rural registered workers. Job losses—ranging from 20 million to 36 million—were concentrated among migrant workers, who have typically lacked employment protection, have tended to be concentrated in export-oriented sectors, and were among the easiest to lay off when the crisis hit.

In response to the crisis and fears of widespread unemployment, China's government responded with a massive stimulus program, equivalent to over 13 percent of annual GDP, complemented by a range of active labor market programs, training programs, and credit support for small and medium enterprises. Neither information on the implementation of these programs (which was highly decentralized, nonrandom, and left to local governments) nor important data (such as expenditures) are publicly available, frustrating any effort to determine the relative role of programs, stimulus, and general economic growth in moderating employment shock. Nonetheless, available evidence does suggest that the stimulus helped expand employment

outside of export sectors (construction and services) and that while rural registered residents experienced a severe employment shock, the vast majority were reemployed by late 2009. By early 2010, China's research community was again speaking of labor shortages.

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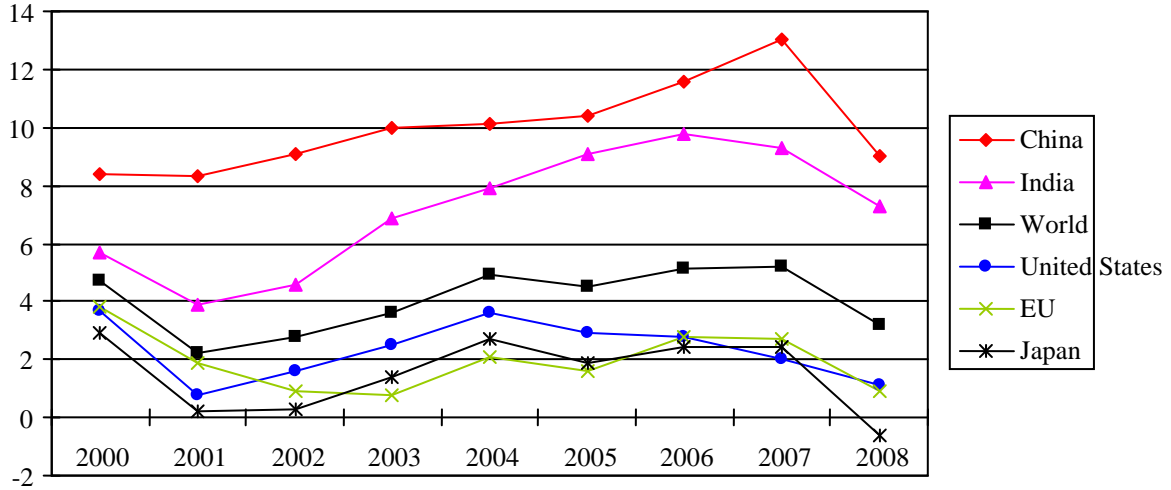
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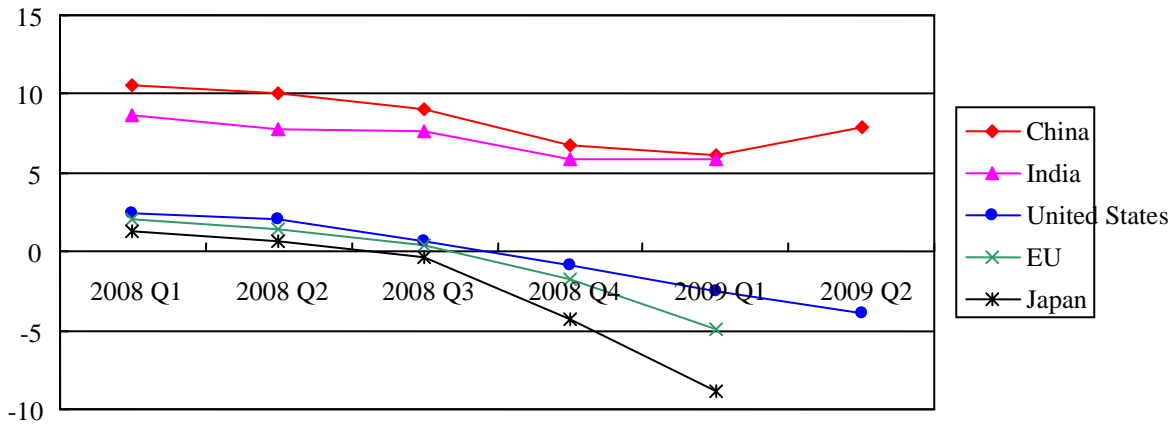
Figure 1

**Annual and Quarterly GDP Growth Rates for China
and Other Major Economies, 2000–09**
(percent)

6.1a Annual GDP Growth Rates, 2000–08

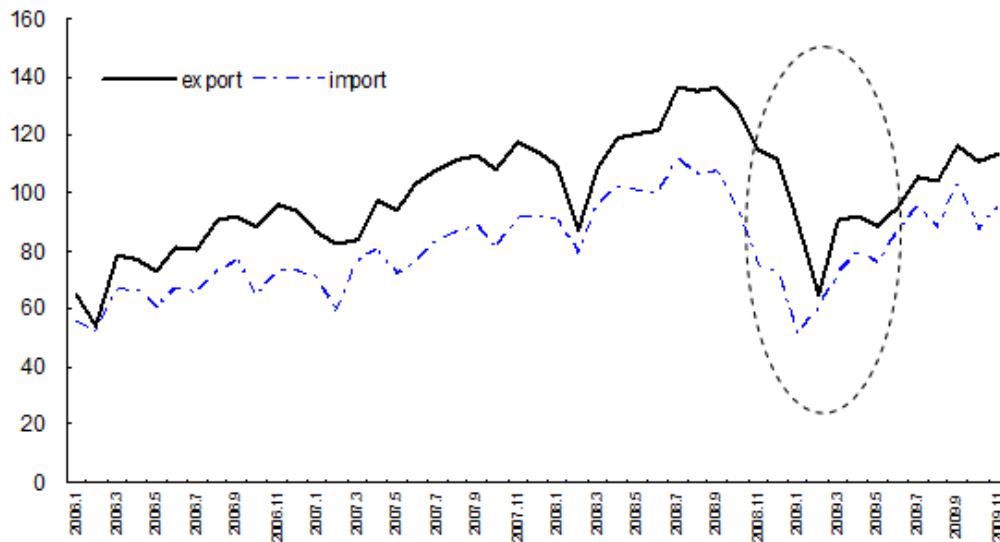


6.1b Quarterly Annualized GDP Growth Rates, January 2008–June 2009



Source: IMF 2009.
Source: IMF 2009.

Figure 2
Monthly Changes in the Total Value of Imports and Exports,
January 2006–November 2009
 (billions of U.S. dollars)

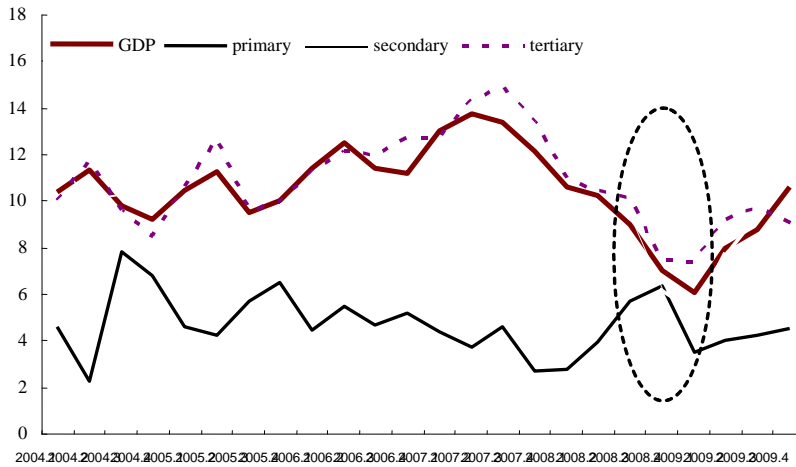


Source: China Customs (2010).

<<Typesetter: Label y-axis “US\$ billions.” Label x-axis “year.” Move trend line labels to the appropriate line. Label years along the x-axis with year only; retain tick marks to indicate data from other months. Set all tick marks outside graph. >>

Source: China Customs (2010). Note that the circle highlights the period of the global financial crisis.

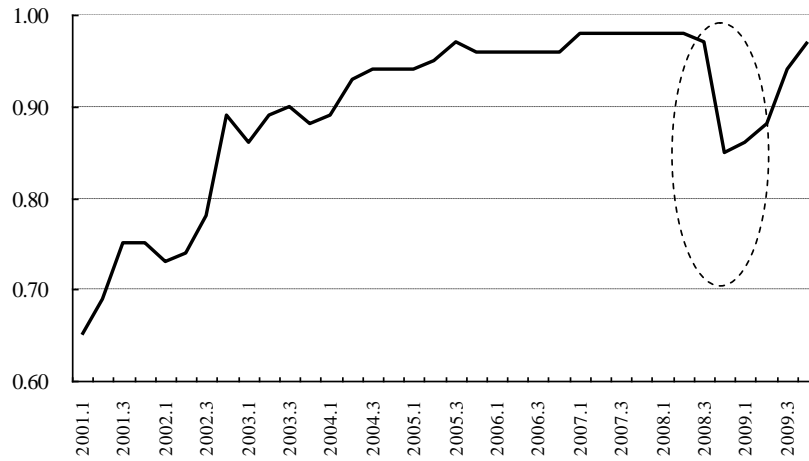
Figure 3
China's Quarterly Growth Rates by Sector, 2004–09
 (percent)



Source: NBS (2010b). Note that the circle highlights the period of the global financial crisis.

Source: NBS (2010b). Note that the circle highlights the period of the global financial crisis.

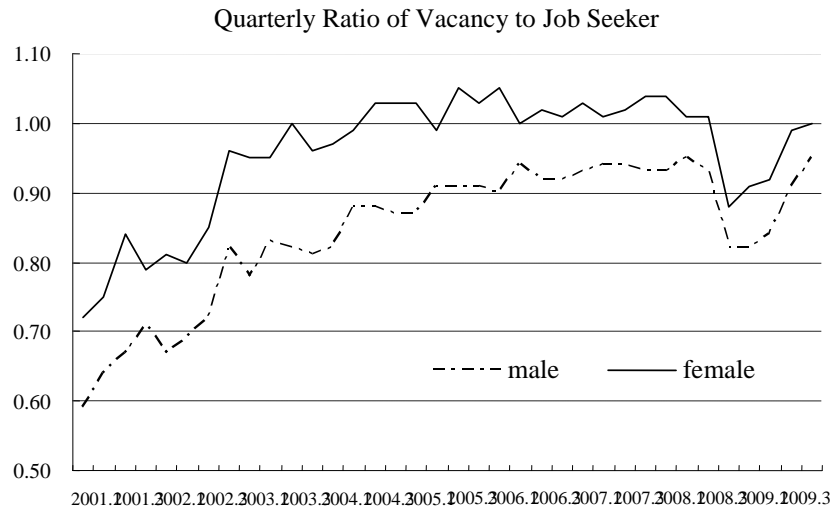
Figure 4
Quarterly Ratio of Vacancies to Job Seekers in China, 2001–09



Source: China Labor Market Information Center (2010).

Note that the circle highlights the period of the global financial crisis.

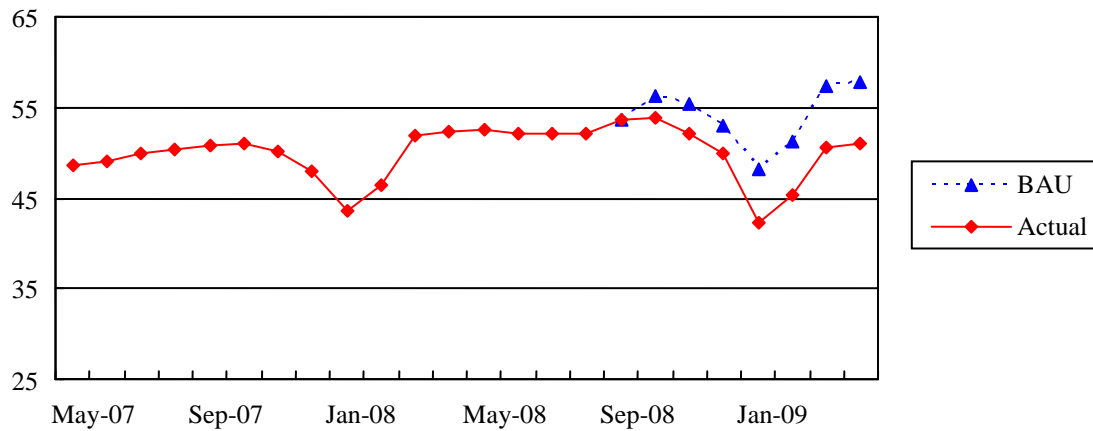
Figure 5
Quarterly Ratio of Vacancies to Job Seekers in China, by Gender, 2001–09



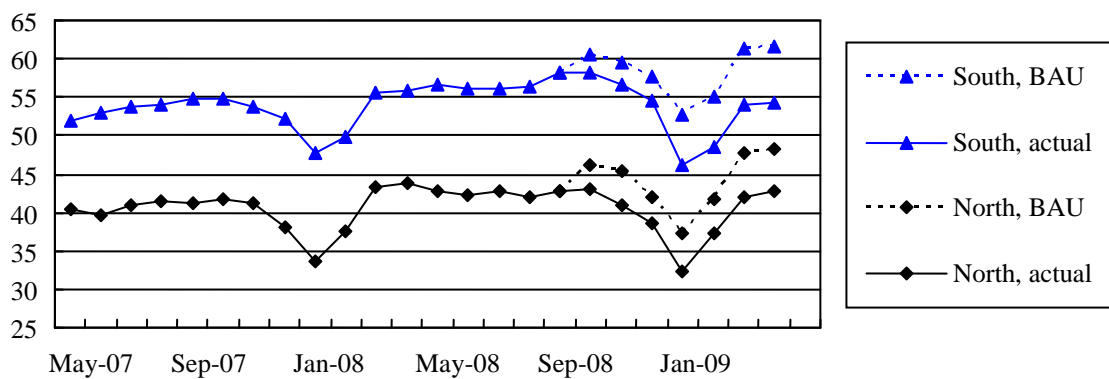
Source: China Labor Market Information Center (2010).

Figure 6
Monthly Share of Rural Labor Force with Off-farm Employment: Actual and Under a
Business-as-Usual Counterfactual, May 2007 to April 2009
(percent)

A. China



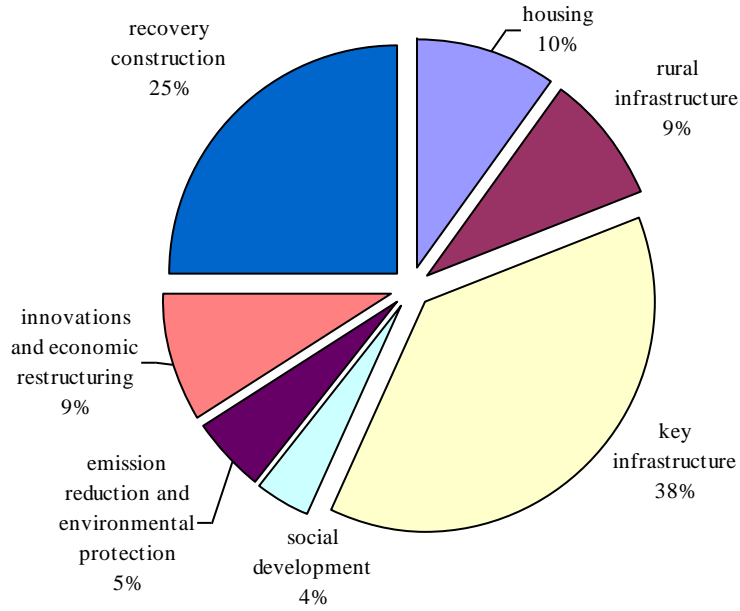
B. South and North China



Source: Huang et al. (2011).

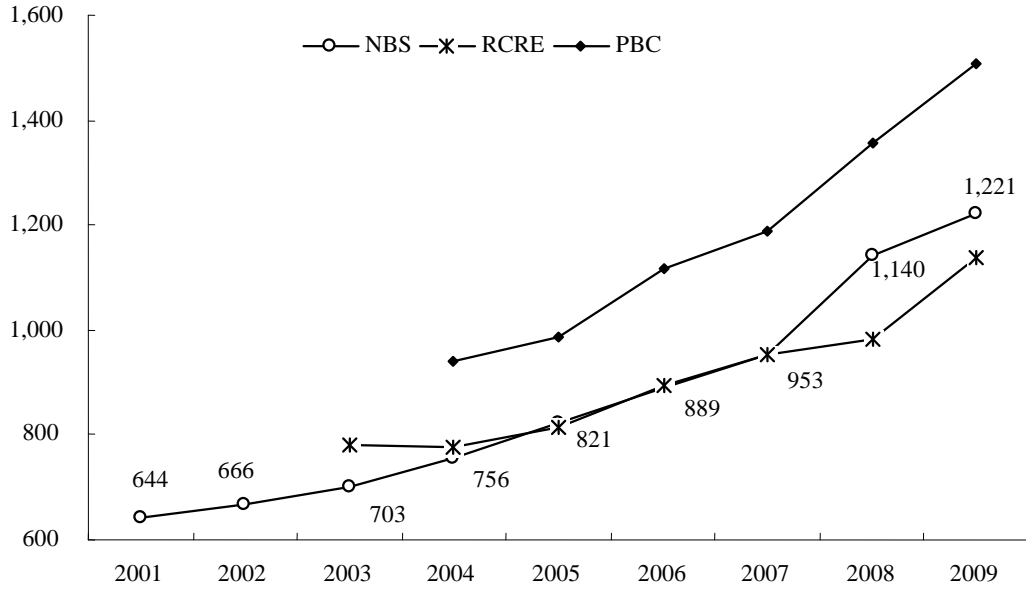
Note: BAU = business as usual.

Figure 7
Composition of China's 4 Trillion Yuan Stimulus Package, 2009



Source: National Development and Reform Committee (2009).

Figure 8
Real Wages of Employed Migrants according to Three Data Sources,
2001–09



Sources: NBS (2010b) RCRE; People’s Bank of China (2010).

Sources: National Bureau of Statistics (NBS, 2010); RCRE (various years);
 People’s Bank of China (2010).

Table 1
Annual Percentage Changes in Employment in China,
2008–09

	June 2008	December 2008	June 2009
All firms	3.03	-0.53	2.87
Nonexporters	3.27	0.68	3.20
Exporters	2.76	-1.92	2.48
By ownership			
State/collective	-6.05	-0.83	1.78
Private	2.61	0.99	5.40
Joint/Ltd/Other	3.70	0.65	1.70
Foreign	3.84	-4.55	4.30
By size (no. employees)			
Smallest quartile	2.11	0.48	3.41
Second quartile	3.00	0.28	3.20
Third quartile	3.00	0.16	4.16
Largest quartile	3.05	-0.72	2.63

Source: CNFS (2009).

Table 2
Changes in Employment of Migrants versus
Changes in Employment of Local Residents in
China, June 2008, December 2008, and June 2009
(% change from six months earlier)

		Jun. 2008	December 2008	June 2009
All firms	migrants	4.76	-0.88	5.29
	local	3.23	-0.07	2.09
Nonexporters	migrants	5.44	1.23	5.71
	local	3.51	0.06	3.35
Exporters	migrants	4.22	-2.74	5.01
	local	2.80	-0.27	-0.01

Source: CNFS (2009)

Table 3 Share of Migrants in Selected Employment Sectors in China, 2008–09

(percent)

	2008	2009
Manufacturing	42.0	39.1
Construction	16.3	17.3
Hotels and catering	7.6	7.8
Wholesale and retail trade	7.0	7.8
Transport	5.6	5.9
Other	21.5	22.1

Source: Calculated from NBS national rural household survey data compiled in Sheng (2009).

Table 4
Working Hours and Earnings in China from September 2008 to
February 2010

	Weekly working hours	Monthly earnings (yuan)	Hourly earnings (yuan/hour)
Local workers			
Sept. 2008	43.50	2,104	11.96
Mar. 2009	43.69	2319	13.12
Feb. 2010	44.88	2,454	13.53
Migrant workers			
Sept. 2008	55.13	2290	10.81
Mar. 2009	55.69	2466	11.61
Feb. 2010	56.98	2591	11.94

Source: China Urban Labor Survey (CULS3, 2010)

1. China's labor contract law, effective January 1, 2008, mandates contract terms, severance conditions, and payment of social insurance benefits. After two fixed-term contracts or 10 years of employment, whichever is shorter, the law requires firms to provide employees with open-ended contracts. The probationary period for new hires is limited to one to three months, depending on contract length, and regulations were placed on temporary work agencies (labor service companies) to prevent using them to circumvent the labor law. Finally, severance provisions require that employees receive 30 days written notice before termination, one month's severance pay for each year of service (half-month's pay if less than six months), and double severance pay for unfair dismissal.

2. In its first year, the survey was conducted in 59 cities and has expanded gradually over time to 159 cities in 2009.

³The Rural to Urban Migration in China and Indonesia project assembles comparable survey data on migrants in China and Indonesia. In contrast to household and other geographic approaches to sampling migrants in China, the migrant sample for this survey was conducted by first developing a sample frame of enterprises likely to employ migrants. In a second stage, enterprises and migrants were then sampled. The project surveyed 5,007 rural-to-urban migrants who worked in 15 cities and responds to a common concern that surveys centered on households will oversample stable migrants and miss migrants living in work units and at work sites. An important drawback of the sampling approach is that it is difficult for researchers to know the characteristics of the population from which the sample is drawn.

⁴This survey was designed and implemented in collaboration with researchers from the University of Oxford, the China Center for Economic Research at Beijing University, the Institute for Population and Labor Economics at the Chinese Academy of Social Sciences, and the Development Research Group at the World Bank.

⁵The China Urban Labor Survey comprises three repeated cross-sectional surveys (2001, 2005, and 2010) conducted in five large urban areas (and a sixth was added in 2010). The survey includes local resident and migrant samples drawn from a geographic-based sampling frame in each city based on dwellings (which are not necessarily household units).

⁶Unlike the Rural to Urban Migration in China and Indonesia data source, researchers using these data have a clear understanding of the population from which the sample is drawn. These data sources aim to draw a representative sample of rural households, which will provide a representative characterization of rural migrant labor as well.

⁷The share of the migrant workforce losing employment with this shock depends on how one defines a migrant, and even different publications from the National Bureau of Statistics using the same data source define them differently. At year-end 2008, Chen (2010) projects that the migrant labor force was 225 million rural registered residents, but this number includes migrants working for any amount of time outside of home villages. Migrants may be more or less permanent. Other work using the rural household survey of the National Bureau of Statistics suggests that there were 142 million rural migrants employed long term (for more than six months) outside their home villages at the end of 2008 (NBS 2010).

⁸An exception is Wang et al. (2009), which suggests that workers from poorer regions shifted more quickly back into agriculture or local nonagricultural employment, so that by June 2009, there was only a 4 percent drop in employment among workers from China's poor areas.

⁹The China National Rural Survey (CNRS) dataset includes information from 58 randomly selected villages in six provinces of rural China representative of China's major agricultural regions (it is "national" under the assumption that these six provinces are nationally representative). The provinces are Hebei, Hubei, Liaoning, Shaanxi, Sichuan, and Zhejiang. Within province, sampling was stratified by county income quintile (as measured by gross value of industrial output) with one county chosen per income quintile. Within each county, two villages were randomly selected, and then survey teams used village rosters to select 20 households per village. A total of 1,160 households were sampled in 2008, which were the same households in the original 2000 survey less 40 households in two earthquake-damaged villages of Sichuan.

¹⁰One weakness of this approach is that the counterfactual assumes that prior trends in the growth of migrant employment would continue in the absence of the crisis. Given that it may have taken time for the full effects of the 2008 labor contract law to be felt, this counterfactual may be based on an overly optimistic assumption of migrant employment growth, especially since the years just before the crisis were years of high employment growth.

¹¹Readers familiar with the conventional categories of unemployment, employment, and labor force participation may at first wonder at the usefulness of categories of *laid-off workers*, *newcomers*, and *delayed entrants* used in this analysis. It is important to remember that workers laid off from off-farm either found employment in agriculture or were engaged in household tasks. In this sense, an unemployment and labor force participation rate make little sense as workers are still fully employed but not in off-farm activities. The framework used by Huang et al. is intended to pick up the gross shock to employment off-farm.

¹²Ministry of Human Resources and Social Security (2009): *Notice on Reducing Enterprise Burdens and Stabilizing Employment*.

¹³Circular "Implementation of Special Vocational and Skills Training Programs," Ministry of Human Resources and Social Security, January 7, 2009.

¹⁴No. 1 Document of the Central Committee of the Communist Party. Each year, the No. 1 Document addresses the top concern and work priority. The centrality of migrant employment in the February 2009 document suggests recognition that migrants bore the burden of adjustment in the wake of the crisis.