The challenges facing young workers during rural labor transition

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Abstract

Purpose – The paper aims to discuss whether the younger generation of China's rural labor force is prepared, in terms of education level or labor quality, for the future labor markets under China's industrial upgrading.

Design/methodology/approach – Using nationally representative survey data, the paper gives detailed discussions on the young rural laborers' education attainments, and their off-farm employment status including job patterns, working hours, and hourly wage rates. The relationship between education and employment status is analyzed and tested. Through these discussions, an employment challenge is revealed, and some policy implications are made.

Findings – This paper finds that China's young rural laborers are generally poorly educated and mainly unskilled. They work long hours and are low paid. While they lack the labor quality that will be required to meet the industrial upgrading, an employment challenge may face them in the near future. This paper also finds a strong link between education levels and employment status for the young labor force, which implies the possible effect of policies such as improving rural education.

Originality/value – Based on a solid foundation of a national rural household survey, this paper updates the understanding of the education and employment situations of the young rural labor force in contemporary China. The concern about the employment challenges raised in the paper is related to the future of China's rural labor transition and the whole economy.

Keywords Labour market, Young adults, Rural areas, Education, Farms, China

Paper type Research paper

1. Introduction

Over the past three decades, China has made remarkable progress along the path of economic transformation. One of the most significant areas of progress is the development of the rural labor market, demonstrated by the rapid rise in the participation rates of off-farm employment by the rural labor force. While only 4 percent of the rural labor force worked full time off the farm in 1980, 45 percent of the rural labor force had jobs off the farm in 2004 rising to 55 percent in 2007 (Zhang, L. *et al.*, 2008). In particular, the off-farm participation rate is extremely high among the young rural labor force. For example, in the 16-25 year old age group, more than 80 percent had off-farm jobs in 2007. It is safe to say

JEL classification – J24, J61, O15

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that China's labor transition from the agricultural sector to the non-agricultural sector is nearly complete for the younger generation (Zhang, L. *et al.*, 2008).

Rural labor transition not only plays a vital role in poverty alleviation in China by increasing income and bringing greater investment into poor rural areas (Du *et al.*, 2005; deBrauw and Giles, 2008), but also pushes China to modernize successfully by shifting a largely rural population to an urban one. The proportion of the population living in urban areas increased from 18 to 44 percent between 1978 and 2006 (National Bureau of Statistics (NBS), 2008a), which was due, to a great extent, to the successful transition of the rural labor force into urban areas during this period.

However, it should be noted that the continuous labor transition from agriculture to modern industries was based on China's industrialization built on low-wage rates. The wage rates did not rise for the unskilled labor force in China for more than two decades (Park *et al.*, 2007). An empirical research of the northern Jinagsu Province in China demonstrates that the real wage rates for a ten- to 12-hour per day unskilled laborer remained unchanged from 1988 to 2002 (Liu *et al.*, 2009).

But in recent years, the Chinese labor force is becoming more and more expensive. A recent study using nationally representative data shows that starting in 2003, off-farm unskilled wages increased about 15 percent per annum (Park *et al.*, 2007). In fact, it is not surprising to see a wage rate increase in recent years because after decades of rural labor transition there are not many laborers left in the villages. Although there are still large numbers of people in rural China, they are mainly middle-aged or elderly men and women who are farming or taking care of children. Unlike the past, in order to draw these laborers out of the village, it will apparently take a higher wage rate to attract them (Zhang, L. *et al.*, 2008).

The rising of wages puts pressure on China's low end labor-intensive industries. While wage rising will be good for continued poverty alleviation and contribute to rising welfare for large segments of the rural population, it will also lead to new industrialization and modernization challenges. In fact, signs are emerging that the rising labor costs of China's industry were already having an effect even before the financial crisis. It has been reported that many low-wage firms in China are closing down and multinational companies are beginning to shift investments in labor-intensive industries to places outside of China (Xu and He, 2008; Chen, 2008). The moving out of labor-intensive industries means there are fewer unskilled manual jobs left in China, which will bring some challenges for the contemporary rural labor force. The losing of off-farm opportunities was especially sharpened by the recent global financial crisis, where according to the official statistic about 20 million migrant workers returned home after losing their jobs as the global financial crisis hit China's economy hard, mainly the export factories which are the traditional employers of China's rural laborers (Xinhua, 2005).

If China wants its economy to continue rapid growth under the higher wage rates, the industries in this country will have to begin to move themselves up the productivity ladder (Zi and Xu, 2006). This situation sets new requirements for the labor force in China. It is well known in development literature that one of the keys for industrial upgrading is to have a well-educated labor force that is able to deal with newer, more sophisticated technologies in an ever-changing work place ((The) World Bank, 2005; Bernanke, 2007; Holz, 2008). Thus, the question is whether China's labor force has been prepared to take on the task of technology upgrading, and whether they are qualified enough in education level and working skills to get employed in the more technologically advanced factories.

Since the younger generation dominate off-farm employment in rural China (deBrauw *et al.*, 2002; Zhang, L. *et al.*, 2008), the answer to this question about them is related to the future of the ongoing rural labor transition. However, until now there are few studies particularly focusing on the education and employment status of this special group of young men and women. Although a large amount of literature has studied the issues surrounding the rural labor force and raised the problems of poor human capital, low-wage rates, and inferior working conditions (Zhao, 1997; Zhang *et al.*, 2002; Jian and Huang, 2007), little has focused specifically on the younger generation. The lack of this information about the younger generation of the rural labor force limits us from seeing a clear picture of the future of the ongoing rural-urban labor transition process in China.

The overall goal of the paper is to understand the nature of education and employment of the younger generation of the rural labor force in contemporary China, and to identify the major challenges faced by them. To achieve this goal, we have three objectives:

(1) to update our understanding of the education of the young rural labor force;

(2) to increase our knowledge of the employment situation of the young rural labor force; and

(3) to examine the relationship between education and employment conditions, and illustrate the effect of education.

To meet these objectives, the rest of the paper is organized as follows. First, we offer detailed descriptions of the education levels of the young rural labor force. Second, we use empirical data to show situations of the young rural laborers' employment situations, including job patterns, working hours, and wages. Finally, we analyze the relationship between employment and education levels, and empirically test whether a higher level of education is related to better jobs, shorter working hours, and higher earnings. In the conclusion, we discuss the possible challenges faced by the young rural labor forces in getting employed when industrial upgrading takes place in the future, and make some policy suggestions on this.

2. Data source description

The data for this study was collected in a national survey of 2,020 households in five provinces of rural China, conducted by the authors in April 2008. The samples are selected through stratified random sampling. First, five provinces were selected from each of China's major agro-ecological zones from a list of provinces arranged in descending order of gross value of industrial output (GVIO). GVIO was used on the basis of the conclusion of Rozelle (1994, 1996) that GVIO is one of the best predictors of standard of living and development potential and is often more reliable than net rural per capita income.

According to the above procedure, Jiangsu (representing eastern coastal areas of Jiangsu, Zhejiang, Shandong, Fujian, and Guangdong), Sichuan (representing southwestern provinces of Sichuan, Chongqing, Guizhou, Yunnan, Tibet, and Guangxi), Shaanxi (representing northwest provinces of Shanxi, Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang, and Inner Mongolia), Hebei (representing northern and central provinces of Hebei, Henan, Anhui, Hubei, Hunan, and Jiangxi), and Jilin (representing northeastern provinces of Liaoning, Jilin, and Heilongjiang) were selected as the sample provinces. Although, we recognize that we have deviated from the standard definition of China's agro-ecological zones, the realities of survey work justified the five provinces could represent five major socio-economic zones of China.

From each province, five counties were randomly selected, one from each quintile of a list of counties arranged in descending order of GVIO. Within each county, we chose two townships, and within each township, we chose two villages, all following the same procedure as the county selection. Hence, in each sample province, we selected 20 villages (1 province × 5 counties × 2 townships × 2 villages), excepting for Jilin, where there was a problem in the initial village sample selection, so we added one more village in Jilin. Altogether, we selected 101 villages (20 for Jiangsu, Sichuan, Shaanxi, and Hebei, and 21 for Jilin). Our enumerators randomly selected 20 households according to the roster of each village. The number of households was 2,020 households: 420 for Jilin Province, and 400 for the other four sample provinces.

The survey teams asked for information about each household member and each child of the household head, whether they were living at home or not at the time of our interview[1]. Detailed information was collected on household demographic characteristics, individual features, off-farm participations, and other labor market activities. Some parts of the survey were especially designed to learn about the household member's jobs in 2007. We classified all the jobs into 14 kinds, and in addition, we also asked them to give a short description of their jobs.

In China, there is no clear retirement age for rural residents: most people will still be working even when they are above 60 years old. Therefore, we set out the working age population between 16 and 65 years old. Those under 16 years old, enrolled in full-time schooling, and retirees or household members who did not work for health-related reasons were excluded from the labor force. According to this definition, our sample has a total labor force of 5,419 individuals. Since this study is focused on the younger generation, we will be mainly discussing people between 16 and 25 years old, which account for 16.5 percent (895 individuals) of the total rural labor force in our sample. Among the full time off-farm laborers, the 16-25 years old account for 38.7 percent, while among the on-farm laborers, only 7 percent are 16-25 years old. It is clear that more young people are in the off-farm sectors, and the younger generations are dominating off-farm employment in rural China (Table I).

3. Education levels

Our survey finds that, even now, the young rural labor force is still generally poorly educated with regard to formal schooling. Among the 16-25 year old rural labor force in our sample, only 15.9 percent graduated from senior high school or technical school, and

	Number	Percentage of the total labor
Population	1,544	18.2
Labor force	895	16.5
Off-farm participation		
Farm only	170	7.0
Part time	141	9.7
Full time	584	38.7

Table I.
Young rural labor force in the sample (aged 16-25), 2007

Notes: "Farm only" refers to those who do the farming but have no jobs off the farm; "part time" refers to those who do the farming while have off-farm jobs at the same time; "full time" refers to those who do not work on farms and take full time off-farm jobs
Source: Authors' survey

only 5.8 percent obtained college level education (including junior college). In contrast, more than half (56.6 percent) graduated only from junior high school and a fairly large number (21.7 percent) of them only obtained a primary or lower level of education (Table II, Row 1). The average number of years in education for this age group is 9.4 years.

Young rural laborers in off-farm sectors are generally better educated than those in the farming sector. For those with off-farm jobs in our sample, the proportion of primary or lower education is 16.1 percent, while 26.4 percent of them obtained senior high school or an upper level of education. Among those in the farming sector, as much as 40 percent are in the primary or lower levels of education, and only 11 percent of them completed senior high-school education (Table II, Rows 4 and 5). It is well known from numerous studies that the rural labor force working out of agriculture has a better level of education than those left in the villages. Our survey data confirms that young rural laborers with a better education are more likely to work in off-farm sectors.

However, regardless of on or off-farm sectors, the majority of them only obtained a junior level of education. Although it should be noted that the young ones' education levels have significantly improved when compared with the old cohorts (Table II, Rows 1-3), and there is an educational equity between men and women (Table II, Rows 6 and 7), the education attainments are still generally poor for the younger generation, and vary across regions (Table II, Rows 8-12).

High-labor quality is a basic requirement in the process of industrial upgrading. From the experiences of industrialized countries, the education level of China's young

	Primary (%)	Junior (%)	Senior (%)	College (%)	Number
Age					
16-25	21.7	56.6	15.9	5.8	895
26-35	28.3	53.2	12.7	5.9	1,070
Over 36	50.6	38.1	10.9	0.5	5,419
Among the 16-25 years					
On-farm	39.6	49.1	10.1	1.3	170
Off-farm	16.1	57.5	18.4	8	725
Gender					
Male	21.7	56.6	16.7	5	472
Female	21.8	56.8	14.7	6.7	423
Province					
Jiangsu	9.9	53.2	28.4	8.5	140
Sichuan	16.1	58.4	23.5	2	146
Shaanxi	26.4	55.1	11.3	7.2	259
Jilin	27.2	52.3	16.6	4	149
Hebei	23.8	62.4	7.6	6.2	201

Notes: "Primary" refers to those who graduated from primary school; those who failed to complete primary school, and who graduated from primary school but failed to complete junior high school are also included; "junior" refers to those who graduated from junior high school, including those who failed to complete senior high school; "senior" refers to those who graduated from senior high school or technical school; and "college" refers to those who graduated from college or junior college; "total" refers to the total young rural labor force; "farm" refers to the young rural laborers who have no off-farm jobs and only do the farming; "off-farm" refers to the young rural laborers who have off-farm jobs (full- or part-time)
Source: Authors' survey

Table II.
Education levels of the young rural labor force (aged 16-25), 2007

rural labor force today is far from adequate. At the same point in their development, China's successful Asian neighbors – Japan, South Korea, and Taiwan – were sending almost all students to senior high school (OECD, 2007; Zhang and Zhang, 2008). By contrast, nearly 80 percent of young laborers from rural China failed to complete senior high school. The majority of them have only achieved a junior high school or an even lower level of education. Obviously, China's young rural laborers, who will act as a main source of industrial workers in the future, are not educated to a level that is required by industrial upgrading.

Even when compared to many other developing countries, the young rural laborers' education levels are not at all high. For example, in 2006, 20 percent of Vietnam's labor force (15-60 years old) possessed senior high school or upper levels of education (Embassy in Vietnam, 2007). What's more, Vietnam's younger generations are much better educated than the old. According to the Vietnam Longitudinal Survey, as early as 1995, 30 percent of the male and 27 percent of the female 18-30 year old young adults in the Red River Delta areas had attained senior high school or upper education levels (Korinek, 2006). Also, more than 40 percent of Thailand's workers are in senior high school or university (Nakavachara, 2009). And as early as 1989, the average years of schooling of Malaysia's labor force was eight years (Schafgans, 2000). Of course, in an international comparison of education, it is not just the number of years of schooling that is important. The quality of the schooling is also critical. However, indicators of school quality that can be compared across countries are hard to come by, especially for developing countries. We selected two indicators, the trained teacher percentage and the student-teacher ratio at primary school level, to give some general ideas of what China's education quality is like compared to its competitive neighbors. From these two indicators, we found that China's education quality is not better than Vietnam's, Thailand's, and Malaysia's (Table III).

These countries are our neighbors which also have abundant labor force resources. Compared with their labor forces, China's young rural labor force has no educational advantages. With the increase of labor costs in recent years in China, cheap labor forces in these countries will bring about strong competition in attracting labor-intensive industries from China. There may be fewer unskilled jobs suitable for the poorly educated laborers left in China due to this competition, which will be a great threat to the future employment of today's young rural labor force in China.

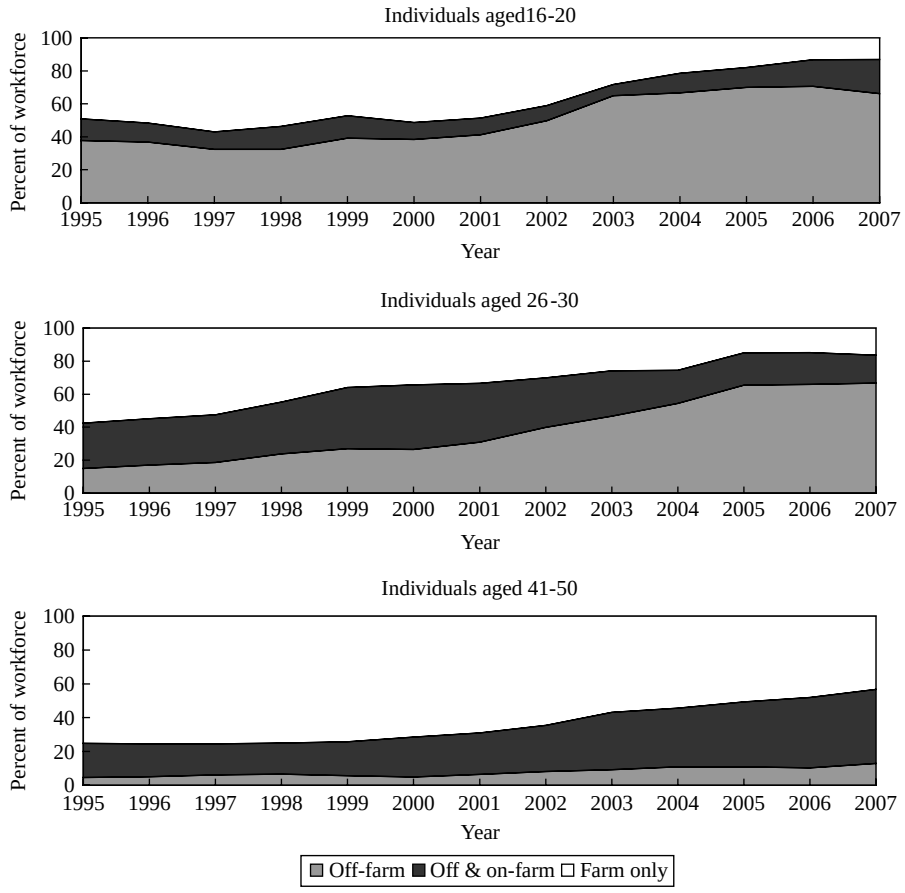
4. Employment situations

The past few decades have seen a continuous increase in off-farm participation in rural China, especially for the younger generation (Figure 1). Zhang, L. *et al.* (2008) illustrate a

Country	Trained teachers in primary education (Percentage of total), 2005	Primary pupil-teacher ratio, 2005
China	84.7	21
Vietnam	93.4	22
Thailand	79.3	21
Malaysia	NA[a]	18

Note: [a]Data not available
Source: (The) World Bank (2007)

Table III.
International comparison of school quality



Notes: "Farm only" refers to those who do the farming but have no jobs off the farm; "off- and on-farm" refers to those who do the farming while having off-farm jobs at the same time; that can also be called part time off-farm; "off-farm" refers to those who do not work on farms and take full time off-farm jobs
Source: Zhang *et al.* (2008)

Figure 1.
Percentage share of rural labor force engaged in off- and on-farm employment, by age group

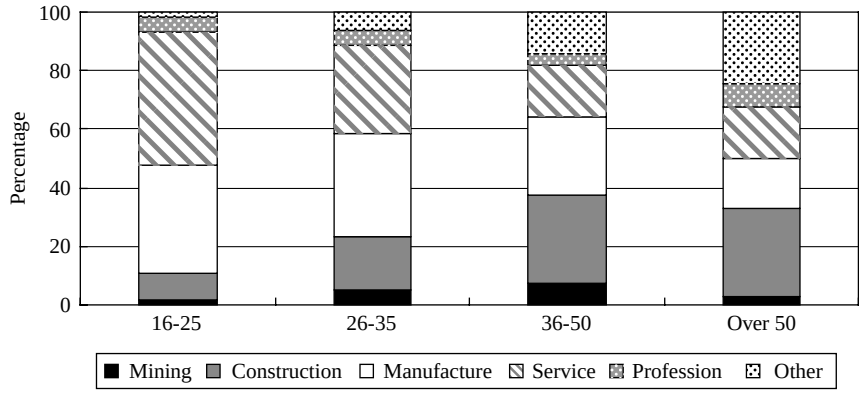
growing tendency for young rural laborers to participate in off-farm sectors and become less engaged in on-farm work. In addition, quite unlike the older generations, young people working off the farm are barely involved in the farming any more. Only, a small part of them take part-time farming work.

In this section, we try to produce an estimate of the off-farm employment situation of young rural laborers. The estimate may make us better understand that the existing young rural labor forces, with low-education levels, are still mainly unskilled manual workers, lacking the requisite labor quality to meet the challenge of industrial upgrading. To provide a profile of their employment situation, we will work with three indicators: the kind of jobs they do, their working hours per day, and their hourly wages.

Our survey asked every household member who was employed in off-farm sectors about their jobs. According to the description of their jobs, we roughly classified them

into six categories: manufacture, construction, mining, services, professional, and others (for the definition of these categories see Figure 2). Compared with the older ones, more young laborers are concentrated in the manufacturing and service sectors, while relatively few are in the mining and construction sectors (Figure 2). Construction and mining work is generally dirty, demanding, dangerous, and provides low-paid unskilled manual jobs in China. From this aspect, it may be that the younger laborers are better off than the older ones. Just like the viewpoint raised in many studies and news reports, the younger generation of the rural labor force differs from their father's generation in that they are more concerned about working conditions. They are less likely to take the hard and dangerous jobs such as mining and building work.

However, from the aspect of working hours per day, young workers have almost the same work intensity as the older ones. The average working hours for 16-25 year old young workers was 9.6 hours per day, which is the same length as, or even longer than that of the older age groups. In the manufacturing sector, for instance, 30.4 percent of the young laborers worked for ten or 11 hours per day, and 21.7 percent worked even longer than 12 hours per day. Generally, long working hours are a significant feature of unskilled manual jobs often with less favorable working conditions, whether in Great Britain's cotton factories during the Industrial Revolution or in the Third World's sweatshops today. It has long been criticized that during the history of rural labor transition, rural laborers in China, because of poor education and work skills, had no choice but to work long hours in various sweatshops. Although we cannot confirm that today's younger generation are still working in sweatshops, our data at least reveals that the younger generation is essentially still working in low end manufacturing.



Notes: "Manufacture" represents workers in factories; according to the short description by the respondents in our survey, most of the factories have a manufacturing function, such as clothing factories, shoe factories, electric equipment factories, toy factories, etc.; "construction" includes building workers, decorators, and roadmen; "mining" includes all kinds of mine workers; "service" includes a large variety of workers in the service sector, such as restaurant waiters, drivers, repairers, plumbers, salespersons, and so on; "profession" includes teachers, doctors, government officials, company mangers, and so on; "others" includes agricultural workers, fishermen, large-scale livestock farmers, some temporary jobs, and village leaders, and some confusing job descriptionsthat can not be classified
Source: Authors' survey

Figure 2.
Percentage share of different jobs of rural labor force, by age group, 2007

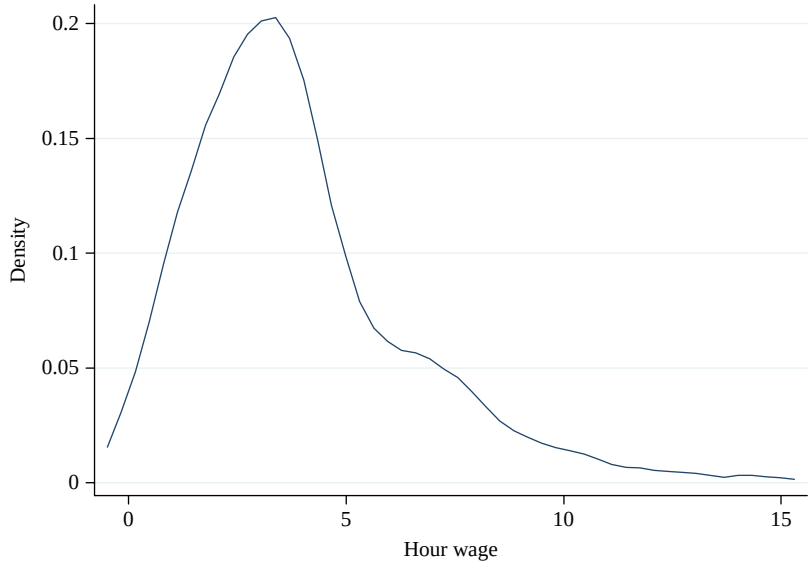
Not only working long hours, but the rural young laborers are also getting low pay from their employers. According to our survey data, the hourly wages of the 16-25 year old young rural laborers is only 4.6 yuan per hour. The distribution of hourly wages is shown in Figure 3. Most (69 percent) of the young laborers earned 2 to 8 yuan per hour. Also, partly due to the low-hourly wage rates, and partly due to the fact that many of them cannot get employment for the whole year, these young laborers also earned much less than urban employees. Even those worked full time off the farm, their yearly earnings were only 9640 yuan in 2007. In contrast, according to the NBS (2008b), the average annual earnings of urban employees in 2007 was 24,932 yuan[2].

The above analysis of education levels and employment status give us an idea of where the contemporary younger generation of China's rural labor force stand. It is clear that they are not a well-prepared labor force in terms of education and working skills, and their future employment opportunities are very unpredictable within the context of China's industrial upgrading.

5. Relationship between education and employment

Given this fact, proper measures need to be taken to help the young rural labor force. Generally, improving school education is the most common suggestion. Many previous studies have demonstrated the positive impact of school education on rural residents' performance in off-farm employment (Hou, 2004; Zhang, H. *et al.*, 2008). Using our data, we linked education levels to employment conditions, and found that young laborers, if better educated, can perform better in the labor markets.

We found that better educated young laborers are less likely to take jobs in sectors such as construction or mining. Of the total young rural laborers (16-25 years old) in our sample, 13 percent of those below the junior high-school education level worked in the construction sector, while only 5 percent of the senior high-school graduates were



Source: Authors' survey

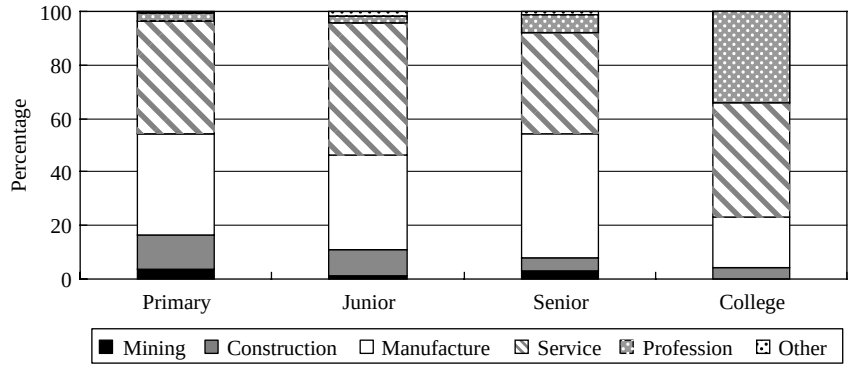
Figure 3.
Kernel density distribution of hourly wages among young rural laborers (aged 16-25), yuan per hour, 2007

in this sector. At the same time, 34 percent of college graduates worked as teachers, doctors, government officials, and so on, while only 3 percent of those with below junior high-school level acquired these jobs (Figure 4). Not surprisingly, higher education levels make the young laborers get better jobs in labor markets.

Also, better education can help the young laborers to avoid working long hours. In the manufacturing sector, those with primary or lower levels of education worked an average of 10.1 hours per day, while the senior high-school graduates worked 9.2 hours per day, and the college graduates nine hours. In the service sector, there is a similar trend (Figure 5).

Also, better educated young workers also earn more than the poorly educated ones. Our survey finds that education, especially senior high-school education, has significant positive effects on off-farm earnings. Those below the senior high-school education level earned less than 4 yuan per hour, while those with senior high school or college levels earned about 6.5 yuan per hour (Figure 6).

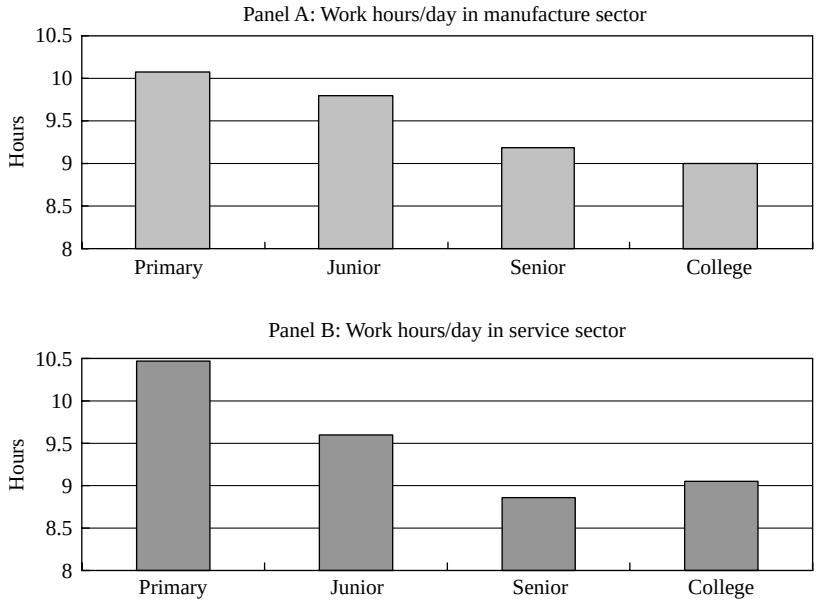
The descriptions above show that education levels greatly differentiate young laborers in employment conditions. However, we could not draw solid conclusions about the relationship between education and employment conditions unless we could control other determining variables. A more accurate examination of the relationship between education and employment conditions was done through some regression models.



Notes: "Primary" refers to those who graduated from primary school, those who failed to complete primary school, and those who graduated from primary school but failed to complete junior high school are also included; "Junior" refers to those who graduated from junior high school, including those who failed to complete senior high school; "Senior" refers to those who graduated from senior high school or technical school (Zhiye Gaozhong and Zhongzhuan); "College" refers to those who graduated from college or junior college (Dazhuan); "Manufacture" represents workers in factories; according to the short description by the respondents in our survey, most of the factories have a manufacturing function, such as clothing factories, shoe factories, electric equipment factories, and toy factories, etc.; "Construction" includes building workers, decorators, and roadmen; "Mining" includes all kinds of mine workers; "Service" includes a large variety of workers in the service sector, such as restaurant waiters, drivers, repairers, plumbers, salespersons, and so on; "Profession" includes teachers, doctors, government officials, company mangers, and so on; "Others" includes agricultural workers, fishermen, large-scale livestock farmers, some temporary jobs, and village leaders, and some confusing job descriptions that can not be classified

Source: Authors' survey

Figure 4.
Percentage share of different jobs among young rural laborers (aged 16-25), by education level, 2007



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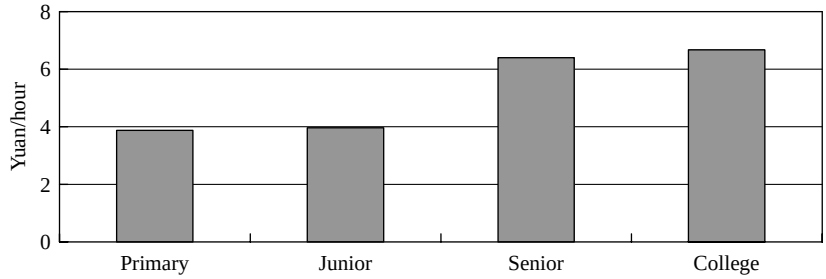
Source: Authors' survey

Figure 5.
Working hours per day among rural laborers aged 16-25 years, in manufacturing sector and service sector, by education level, 2007



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Source: Authors' survey

Figure 6.
Average hourly wages among rural laborers aged 16-25 years, by education level, yuan per hour, 2007

We choose the two variables, working hours and hourly wages, to primarily reflect their performance in the labor markets, and construct the simple linear regression models:

$$\text{Hours}_i = \alpha E_i + \delta \text{Exp}_i + \eta \text{Exp}_i^2 + \mathbf{X}_i \beta + u_i \,,$$

$$\log \text{Wage}_i = \alpha E_i + \delta \text{Exp}_i + \eta \text{Exp}_i^2 + \mathbf{X}_i \beta + u_i \,,$$

where Hours_i is the working hours per day for an individual i; $\log \text{Wage}_i$ is the natural logarithm of hourly wage for an individual i; E_i is the years of education; Exp_i is an experience measure; Exp_i^2 is experience squared; $\mathbf{X}_i$ is a vector of feature variables including age, gender, and household non-labor ratio (this is the ratio of non-labor members to the total household members, which may serve as an indicator of family support burden). We also include provincial dummy variables in $\mathbf{X}_i$ to interpret regional differences; and u_i is a disturbance term representing other factors that may not be explicitly measured.

Table IV shows the estimated results of the two models. Consistent with the findings in the statistical descriptions above, the multivariate analysis demonstrates that education has a strong effect on reducing working hours. Controlling for other variables, a young laborer with an additional year of education will be expected to work 0.1 hours shorter per day (Table IV, Column 2). Also, education has a positive effect on hourly wages. A young worker with an additional year of education will be expected to earn 4 percent more per hour (Table IV, Column 3). Both results are statistically significant.

These findings provide clear evidence of strong linkage between education and employment performance. An important implication is that investing on rural education would be a good policy strategy to improve the future quality of the young rural labor force, to make them better prepared to meet the employment challenges they will face in the near future.

6. Conclusions

In this paper, we use a nearly national representative dataset to examine the education and employment status of the younger generation of the rural labor force. Our description and analysis of the up-to-date data have shown that, although the majority of the existing

	Dependent variable			
Explanatory variables	Working hours per day	*t*-statistic	Hourly wages (logarithm)	*t*-statistic
Years of education	−0.108	−3.658***	0.041	3.238***
Years of experience	−0.0534	−0.461	−0.0231	−0.437
Experience squared	0.0242	1.690*	0.00265	−0.389
Age	−0.0527	−1.562	0.0544	3.641***
Gender (1 − male)	0.0295	−0.19	0.185	2.749***
Ratio of non-labor in total household members	−0.743	−1.643	−0.254	−1.295
Constant	11.89	17.10***	−0.634	−2.089**
Province dummies	Included		Included	
Observations	706		638	

Notes: *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$
Source: Author's survey

Table IV.
The effect of education on young rural laborers in China, 2007

young rural labor forces in China have moved out of the agriculture sector, they are generally poorly educated and working as unskilled manual workers. Most of them, only have a junior high-school level of education, and still mainly work long hours in low-paid jobs, just as their fathers did in the past. As the era of comparative advantage of low-labor costs has ended, industrial upgrading is inevitable in China. Owing to poor education and lack of skills, the future demand for a highly educated and skilled labor force is unlikely to be met by the existing young rural labor force. Hence, it is very likely they will face employment challenges in the near future, alongside challenges to the rural labor transition in China. Through analyzing the relationship between young laborers' education and their jobs, it is suggested that improving education levels could help to increase the younger generation's labor quality, and to help them to better confront the employment challenges in the coming industrial upgrading.

One of the keys for China to staying competitive is to have the average rural child be educated to a degree (at least to the level of high school, specifically) that is needed to support a modern, industrial society. According to one of our other analyses (Rural Education Action Project (REAP) Brief No. 108), only around 20-30 percent of junior high graduates in rural areas go on to attend academic high schools. Also according to our analysis, the level of tuition fees in high schools in rural China may mitigate against educational access.

The study also shows that not only is financing high school an enormous burden for the families of poor students, there is little financial aid available. There are other problems too; the high rates of tuition fees – which are sometimes more than ten times the per capita income of those on the poverty line (and higher when considering the opportunity costs) – constitutes one of the greatest barriers to high-school education in rural China.

If the above reasons are barriers to the rural population getting a higher education, policy makers in China need to take steps to eliminate the barrier. We believe that China has the resources to eliminate tuition fees all over China. Policy makers should consider a program like PROGRESA in Mexico, which provides free tuition at high-school level for the poor, and even provides the poor with payments for sending their kids to high school. China's future depends on improving enrollment into high school. Eliminating tuition fees for those that have difficulty paying such high levels is one concrete step it can take to move in that direction.

Notes

1. For those household members who were not at home during our visit, we will conduct follow-up calls for the information that we could not obtain from his/her family. Those who had permanently migrated and only visited his/her relatives during holidays were no longer counted as family members.
2. According to the NBS, this is a narrow range of statistics, which includes only employees in state-owned units, collective units, LTD companies, foreign-invested enterprises, and so on. Many informal employees are excluded (http://news.sina.com.cn/c/2009-08-07/021618380990.shtml, accessed December 2, 2009). But this, in fact, narrowly defines urban citizens.

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