

# Do the Recent Labor Market Changes Negatively Affect the Schooling?

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## Abstract

The Chinese labor market has witnessed great transition from dual labor market to a new classic one. With growing wages for skilled workers, its impact on schooling should be concerned by policy makers. Taking advantage of national representative data with large sample, this paper empirically examine the hypothesis that increasing opportunity costs reduce schooling. The empirical result is of particular relevance to poor areas where people tend to have high discount rate and value more on real time income. Although the total public investments in education have been increasing substantially, based on the study in this paper, it is still worth noting that targeting the relevant regions and compensating opportunity costs will improve the efficiency of the investments.

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## 1. Introduction

The Chinese labor market has witnessed dramatic changes in recent years, which is characterized as frequent labor shortages and growing wages for unskilled workers. The implications for these changes are rich both for current labor market participants and for the future entrants as well. Although it's quite evident to see the impacts of the changing labor market outcomes on workers' behaviors and welfare, its second order effect is often neglected. Among them, whether the wage increase for unskilled workers encourages the students to drop out of schooling is of great importance for policy makers to respond.

The ignorance of such impacts of current labor market outcomes on the future labor market participants is quite dangerous for China's economic development. First of all, with declining potential growth rate (Cai and Lu, 2012), the future economic growth in China heavily relies on productivity growth, which is on the premise of a higher level of human capital. After passing through the Lewis turning point, due to the exhaustion of surplus labor, it is much more difficult for China to gain economic growth through reallocating labor from low productivity sectors to high productivity sectors. For instance, according to our estimation (Du, et al., 2011), reallocating labor from agricultural to non-agricultural sectors has contributed to 23.1% of economic growth in the first five years of this century, but the share has declined to 11.7% in the subsequent five years. If we compare this results to the estimation on the last two decades in the last century (the World Bank, 1997), it has also witnessed a significant decreased contribution. In order to sustain

the economic growth, which is necessary to a middle-income country approaching to a high-income economy, China will have to help the workers to enhance their productivity at their new sectors by improving their human capital when the economic growth is hard to be achieved by simply moving the labor across sectors with different levels of productivity.

Second of all, unlike many other social policies, the government is the most important stakeholder because of the large externality of education investment. When facing with growing opportunity costs of schooling, it seems rational for individuals to give up schooling and to participate in labor market although the *Compulsory Education Law* has already regulated minimum level of education one has to complete. This is particularly true for poor families that tend to have high discount rate and value more on current income. Under such a circumstance, the country will bear the price of loss in social returns of education. To offset the negative externality of individual decision, the government must take the responsibility to respond the negative externality in public policy.

Thirdly, the timing of policy intervention in individual decision of schooling is quite urgent. As we know, most of labor market participants accumulate their human capital before entering the market, so current decisions may affect the future productivity. When facing with growing wages, the government has to react promptly to keep the students in school in order to catch up the window. Otherwise, the workers in the future labor market would miss the change to accumulate the human capital they should have.

Although the classic theory predicts the negative impacts of high opportunity costs on schooling decisions, there is sparse empirical evidence in China to support this argument. Data limitation in China is one of the main reasons that confine the empirical studies. To sketch the overall situations, national representative datasets are needed. However, the statistics on schooling that is based on reporting system conducted by education administrative system is notorious for low quality. In addition, combining wage information with schooling decision variables together makes more difficulties. Taking advantage of two rounds of population census data,

this paper tries to make some progress in empirical studies.

In this paper, we look at a specific group of children facing with schooling decisions, i.e., kids between age 13 and 16. The reasons to focus on this group of children are as following. First, children at this age group are supposed to study in junior high school. According to the *Compulsory Education Law* in China, this is also a stage of compulsory education, which means that both the government and the parents are responsible for this group of children to complete the education. Second, when reaching age 16, those children are legitimated to enter the labor market and not taken granted as child labor any more. Therefore, the changing labor market outcomes may be very attractive to this group children and affecting their schooling decision.

In contrast to urban areas, the growing wages for unskilled workers would have large impacts on schooling decisions in rural China, in particular for those who live in poor areas. In general the poor family tends to have high discount rate, which makes them value more on current incomes when making intertemporal choices. In addition, although the population policy is universal all over the China, there is still significant distinction between rural and urban areas whereas the women in rural areas are generally allowed to have two or even more children by the policy. For some minorities that belong to the targeted group of this study, the population policy is even more relaxed. Considering that the central and western China is less urbanized than the developed regions, the fertility rates are higher in those areas too. As we have already seen shrinking supply of young workers in China, it is good to believe that in the future the less developed regions in China will play more important role in labor supply. Therefore, for the sake of sustaining economic growth it is of great importance for China to enhance the quality of future human resource in those regions by increasing and improving the education investments in both school infrastructure and individual subsidy as well.

The rest of the paper is organized as follows. The next section describes the labor market changes and how they affect the schooling decisions. Section three introduces the data we use in this paper and the main variables of interests. In section

four we take advantage of national representative data to examine how the growing wages of relevant group of workers affect the schooling decisions in the targeted group of kids we are interested. The last section discusses the main findings in this paper and draw conclusions.

## 2. Labor Market Changes and Schooling

One of the stylized facts of the labor market changes in recent years is the growing wages for unskilled workers. Although we lack of national representative data to break down the wage information by skill, it is generally acceptable to treat the rural migrant workers as unskilled ones in urban labor market. The wage growth of migration workers contrasts its stagnancy in the last century and reflects the increasing scarcity of unskilled workers. According to the rural household survey conducted by the National Bureau of Statistics (hereafter the NBS), for rural migrant workers, the compound growth rate of wage in real term per annum is 6.7 per cent from 2001 to 2006, and 12.4 per cent from 2006 to 2011. In contrast, the wage growth rate for workers in urban unit<sup>1</sup> is 12.6 per cent and 11.0 per cent during the same periods respectively. This statistics indicates that rural migrants actually have had fast wage growth in recent years.

It is predictable that wages across different groups of workers may converge if the unskilled workers catch up the others quickly. The existing study using three rounds of urban household survey, China Urban Household Survey (CULS), including both urban local workers and migrant workers indicates that in urban labor market the wages have converged between local workers and migrants over time. Meanwhile, among the migrant workers, it is found that the returns to education converge too across workers with various stage of education attainment too. For example, workers finished senior high school earned 25.9 per cent more than workers who only complete the junior high school in 2001. But the premium

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<sup>1</sup> Urban unit is the employer reporting its employment information to the statistical system. Usually it includes the SOEs, urban collective enterprises, and other state owned sectors, but excludes many emerging private sector. The employment and wage information based on such reporting system is notorious for its inaccuracy.

dropped to 17.3 per cent in 2005 and 16.9 per cent in 2010 (Cai and Du, 2011), which implies that the expected returns to have additional years of schooling have been decreasing over time.

Unlike the wage structure induced by skill biased technology change, which is believed as one of the main forces driving the inequality in developed countries (Acemoglu, 2003), the converging wages between skilled and unskilled workers are helpful to reduce the income inequality in China. Although this is good news to bridge the individual income gap, it is not the case to encourage the human capital accumulation by increasing the opportunity costs of schooling.

The wage convergence also takes place across regions. In recent years, the firms in interior China have also been suffering from labor shortage as the employers in coastal areas did. As a result of labor market integration across regions, the migrant workers' wages in different areas have converged. As shown in figure 1, in 2003 average wage for migrant workers in central and western China was about three fourths of that in coastal areas while in 2009 wages across different regions almost reached the same level even without controlling for the spatial difference in purchasing power. It is obvious that the wage signals from local labor markets affect individuals' decisions more directly than the information from other labor markets. This change is particularly relevant to the poor areas where people are supposed to have high discount rate. In the following analysis of this paper, we may find that kids in poor areas do have high dropout rate.















































