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Published online: 03 Mar 2020.

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# Influences of the Cultural Revolution on the education and wages of today's Chinese laborers

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**ABSTRACT**

More than 40 years after the end of the Cultural Revolution, does it still affect today's Chinese laborers? In this study, data from the 2012 Chinese General Social Survey are used to investigate the possible differences between the education and wage levels of the laborers of parents who have experienced the Cultural Revolution and others who have not. Empirical results show that the average education and wage levels of laborers whose parents have experienced the Cultural Revolution and attained at least primary education qualifications are significantly lower than other groups in the labor market. We believe that during the Cultural Revolution, the political and social climate lowered the public's recognition of the value of education in society and reduced the incentive for human capital investment.

"Courses can be shortened to half in schools … students have to participate in productive and necessary social activities." – Chairman Mao talked about the education revolution in New Year speech on February 13, 1964.

## 1. Introduction

This study attempts to discuss an economic labor issue related to the Cultural Revolution in China. More specifically, one of the questions concerning researchers is whether the Cultural Revolution still cast influences on labor forces in contemporary China. Prevalent studies has shown evidences about the impact of Cultural Revolution on teenagers and its subsequent effects on the labor market (Almond, Edlund, Li, & Zhang, 2010; Dikötter, 2016; Fung & Ha, 2010; Kim & Fleisher, 2010; Meng & Zhao, 2016; Russo, 2016; Susser, Clair, & He, 2008; Xie, Jiang, & Greenman, 2008). The present study therefore aims to investigate how the social climate formed during Cultural Revolution shape school-aged children's views at that time.

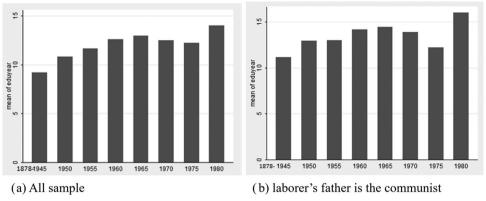(a) All sample  (b) laborer's father is the communist

**Figure 1.** The difference of father birth and laborer's educational level. *Source*: 2012 CGSS.
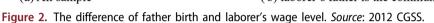
Furthermore, we explore how those who experienced the Cultural Revolution may alter their investments in their children's education, which may indirectly affect the education level their children achieved and their performance in the current labor market.

To this end, data from 2012 Chinese General Social Survey (CGSS) are presented in Figures 1–4, to explore relationship between the education and wage levels of Chinese labors in 2011, and the birth year of their parents. In all the figures, the vertical axis depicts the education and wage levels of Chinese laborers in 2011, whereas the horizontal axis depicts the time of birth of their parents. It can be seen that the birth years of the fathers range from 1878 to 1977 whereas the birth years of the mothers range from 1882 to 1978. First, it can be seen in Figure 1a that for labors whose fathers were born between 1960 and 1975, their average years of education were negatively correlated with their fathers' birth year. It was only for labors with fathers born between 1975 and 1980 that their average years of education were positively correlated with their fathers' birth year. This relationship was also explored for labors with fathers as members of the Communist Party and the results are presented in Figure 1b. A similar trajectory can be found in Figure 1b, whereas these associations seem to be stronger and more noticeable.

Figure 2 presents relationships between labors' wage levels and their parents' year of birth. The graphs show a U-shaped distribution in the wage levels of labors whose parents were born in 1955–1960s and 1975–1980s. Looking at families with Communist Party members, it can be seen that this U-type distribution is steeper. Take Figure 2b for example, for labors born in families with Communist Party members, their wage level was relatively lower when their parents were born in the 1960–1975 period, compared to the labors with parents born during 1950–1960 and 1975–1980 periods. A comprehensive comparison shows a common phenomenon in Figures 1 and 2. The labors with parents born in the 1960–1975 period are vulnerable in terms of average education and wage levels. Based on this finding, the present study further explores whether these labors are at greater risk of low education and wage level due to the impact of the Cultural Revolution.

Previous research has reached a consensus that human capital is the impetus behind economic growth in various countries (Duflo, 2001; Mincer, 1974; Yang &

(a) All sample          (b) laborer's father is the communist

**Figure 2.** The difference of father birth and laborer's wage level. *Source*: 2012 CGSS.

Gao, 2015). Classic literatures, such as Deng and Treiman (1997) and Zhou and Hou (1999), point out that the human capital accumulation in China has been clearly influenced by the Cultural Revolution. However, most of the research focuses on discussing the impact of the Cultural Revolution on citizens across regions in China, or the physical, economic and social impacts on contemporary workers. Less research explores the impact of the Cultural Revolution on contemporary workers through parenting. In recent years, some studies have been conducted to discuss whether the Cultural Revolution affects parents' decisions on their children's choice of spouse, for example, whether parents would compensate for their children's education investment (Han, Suen, & Zhang, 2019; Li, Rosenzweig, & Zhang, 2010; Song, 2009). A limited number of studies, however, discuss the impact of social climate on those who have experienced the Cultural Revolution and whether it will affect the human capital investment decisions about their children.

In this study, we explore whether labors with parents who experienced Cultural Revolution have different educational and wage levels than labors with parents who did not experience the Cultural Revolution. Applying data from 2012 CGSS, this study finds that the average education and wage levels of offspring whose fathers have experienced the Cultural Revolution and attained at least primary education are significantly lower than those of other groups in the current labor market. One of the plausible reasons may be that parents whom have experienced the Cultural Revolution were influenced by the Cultural Revolution and tend to depreciate education, which in turn led to their children's vulnerable positions in labor market in terms of wage levels. In addition to the introduction, this paper consists of four sections. In the second section, a literature review is presented. The third and fourth section explains the methodology, data source and empirical results and the conclusion is explained in the last section.

## 2. Literature review

Several studies have pointed out that human capital has a significant impact on promoting economic growth. Lucas (1988) argued that in addition to enhancing the

internal effects of manufacturers' productivity, human capital could also generate external benefits that promote economic growth through spillover effects. Based on data from Taiwan, Stokey (1991) found that human capital investment could increase the added value of goods, drive manufacturers' profits and promote the improvement of family incomes, and thereafter increase the motivation for human capital investment, which ultimately forms a positive economic growth circle. Based on Taiwanese data from 1965 to 1989, Tallman and Wang (1994) found that the accumulation of human capital during the period of rapid economic growth in Taiwan was as high as 45%. Becker (1975) pointed out that human capital can help improving personal productivity and resource exchange efficiency. It can be accumulated through education, learning, and technology, and its value would be attached to individuals. In other words, in addition to the positive effect that education has on career achievement and salary, a higher education level is associated with a higher probability of achieving high professional status. Kim and Lau (1994) found that in the process of economic development, the accumulation of human capital could effectively slow down the decline of real capital of marginal productivity. Romer (1990) suggested that the endogenous growth theory in human capital (knowledge and R&D) was a source of sustained economic growth.

From 1973 to 1979, the Indonesian government explored the education and future salary levels of workers based on differences between the densities of the construction of primary schools in different regions (Duflo, 2001). The study found that in general, an increase in suburban primary school facilities significantly improved the children's future wage levels. The magnitude of the accumulation of human capital reflects the "level of production capacity" of workers, that is, the level of individual ability is often associated with academic qualifications, knowledge, and skills. Hence, investing in human capital has become an important driving factor to reduce the wealth gap and sustaining economic development (Antràs, Garicano, & Rossi-Hansberg, 2006).

However, previous studies rarely discussed the influence of the Cultural Revolution on the Chinese society and its education system, whereas the few existing studies emphasize the damage caused by the Cultural Revolution. For example, Deng and Treiman (1997) pointed out that the Cultural Revolution has led to a significant reduction in the priority of education for children of Communist Party cadres and intellectuals. Zhou and Hou (1999) investigated residents in 20 Chinese cities and discussed the impact of national policies on the youths in socialist communities in the "Send-Down" campaign at that time. They pointed out that all social groups were adversely affected by these unfavorable national policies, but bureaucrats were able to mitigate the negative effects on their children to a certain extent. The experience of "Send-Down" had a long-lasting effect on the course of individuals' personal lives, which is reflected in the pattern of subsequent life events and the factors that determine personal income. Meng and Gregory (2002) indicated that China ceased normal educational activities for a long time, such as suspending senior high schools and universities for up to six years. Pan (2002) found that the "Send-Down" campaign during the Cultural Revolution forced more than 16 million urban youth to stop their education and work in villages. Cai and Du (2003) estimated the extent of the cumulative damages on human capital during the Cultural Revolution and found the loss of human capital was about 14.3%, based on the average age limit for receiving education.

In a more recent study, Meng and Zhao (2013) found that parents refrained from receiving education due to the Cultural Revolution had children with lower educational levels as well. In other words, the disruption in education caused by the Cultural Revolution not only affected the human capital accumulation at that time, but also affected the accumulation of the next generation. Zhou (2013) analyzed the influence of the "Send-Down" campaign and found that sent-down males were significantly more likely to upgrade their education after the Cultural Revolution, which caused education interruption for an entire generation. The empirical results indicated that the sent-down males who upgraded their education earned a 10% higher income than non-sent-down males who also upgraded their education. Meng and Zhao (2016) investigated the influence of large-scale schooling interruption during the Cultural Revolution on the education of the next generation. They concluded that the parents being more interrupted for their education had children less likely to have completed education.

The aforementioned studies mainly pointed out that the Cultural Revolution had a negative effect on contemporary labors, family education, and the economic level. However, some other studies argued from a different view. For example, Zhang, Liu, and Yung (2007) made a comparison between pairs of twin siblings, of which, one had experienced the send-down whereas the other had not, to observe whether or not the Cultural Revolution had impacted education level and wages. However, the empirical results do not show that the Cultural Revolution had significantly negative impact on the education of primary and secondary schools. In addition, Kueh (2008) found the high family saving rate during the Cultural Revolution was a key driving factor for the rapid economic development in China after 1980. Yang and Li (2011) pointed out that "Sent-Down youth" did not have significantly lower education than those who had not. Although the quality of the education system in China has been severely harmed during the Cultural Revolution, the expansion of elementary schools raised income for families dependent on agriculture today (Yang & Gao, 2015). To summarize, fewer previous researches discussed the impact of the Cultural Revolution on the education and wage level of the next generation. In this study, data from the 2012 CGSS are therefore used to investigate the possible differences between the education and wage levels of the laborers whose parents have experienced the Cultural Revolution and labors whose parents have not.

## 3. Methodology

To study the impact of specific events, dummy variables were used to estimate the impact on the dependent variables before and after the change of event. In empirical analysis, this method can lead to an endogeneity problem if the assumption of independency between the explanatory variables was violated. To solve this problem, Meyer (1995) suggested use the exogenous system alongside environmental changes generated by the natural experiment to compare the variables explained in the system. Therefore, the samples are divided into experimental and control groups for analysis. The impact of the system and environment is greater on the former and relatively

smaller on the latter. Empirical estimates compare the differences of the variables being explained under the event change between the experimental and control groups.

The Cultural Revolution period was akin to a natural experiment—an exogenous shock for the children and adolescents due to exogenous policies. In other words, political and social experimental activities were carried out by the Chinese government during the Cultural Revolution. Both before and after the experiment, Chinese citizens were encouraged to receive education, and intellectuals enjoyed an inspiring social status and educational environment. However, during the Cultural Revolution, destruction of the education system caused the interruption of education for school-aged children, affecting their marriage (Song, 2009), parental compensation (Li et al., 2010), human capital loss and reinvestment (Han et al., 2019), changes in health conditions and personal beliefs (Gong, Lu, & Xie, 2014), and so on. Unluckily, it is difficult to estimate the education and wage level of the subjects if they could have not experienced the Cultural Revolution. We only know the education and wage of citizens in post Cultural Revolution period. Similarly, although the actual state of the control group without the experimental influence can be observed, we are unable to know the post-experimental state of the group.

Therefore, regression coefficients of exogenous shock or experiment effect can be estimated most easily by postulating a constant-effect model, where $Y_{1i}-Y_{0i} = \gamma$ (a constant). The source of omitted-variables bias is assumed to come from a vector of observed covariate, $X_i$, that may be correlated with $D_i$. The identifying assumption in regression models is:

$$E[Y_{0i}|X_i, D_i] = X_i'\beta \tag{1}$$

Where $\beta$ is a vector of regression coefficients. This selection-on-observables assumption has two connotations. First, $Y_{0i}$ (and hence $Y_{1i}$, given the constant-effects assumption) is mean-independent of $D_i$ conditional on $X_i$. Second, the conditional mean function for $Y_{0i}$, given $X_i$ is linear. Given equation (1), it's straightforward to show that

$$\frac{E\left\{Y_i(D_i-R[D_i|X_i])\right\}}{E\left\{D_i(D_i-R[D_i|X_i])\right\}} = \gamma \tag{2}$$

where $R[D_i|X_i]$ are the fitted values from a regression of $D_i$ and $X_i$. This is the coefficient on $D_i$ from the population regression of $Y_i$ on $D_i$ and $X_i$. Then, the law of large numbers ensures that sample regression coefficients estimate this population regression coefficient consistently.

We construct a series of regression models and control for the explanatory variables as follows:

$$Y_i = \alpha + \beta_i X + \gamma_1 facommunist + \gamma_2 faedu + \gamma_3 faborn + \gamma_3 ddfa + \varepsilon_i \tag{3}$$

$$Y_i = \alpha + \beta_i X + \gamma_1 facommunist + \gamma_2 faedu + \gamma_3 faborn + \gamma_3 dddfa + \varepsilon_i \tag{4}$$

Y presents the schooling years or the laborer wage; X presents personal character; facommunist, faedu, and faborn are dummy variables, presenting whether the

laborer's father is the communist or not, whether their education level is above primary school or not, or whether their school age is during the Cultural Revolution. The Communist Party of China has divided the development of the Cultural Revolution into three stages (May 1966–April 1969, April 1969–August 1973, August 1973–October 1976). Therefore, we classify the birth years of laborer's parents into groups depending on different school age. For example, variable faborn1947_56 presents the birth of laborer's father between the years 1947 and 1956, and therefore they may study in education institution above elementary schools between the year 1966 and 1969.

We also included the variable ddfa, an interaction term of faedu and faborn, to control the effect of the education level and birth year of labor's father on laborer's education years and wage level in group comparisons. Variable dddfa is a three-way interaction term of facommunist, faedu, and faborn, and is used to control the effect of the political inclination, education level, and birth year of the laborer's father on the dependent variable $Y_i$. In equation (3), we analyze data from parents who experienced the Cultural Revolution during school years, and their influence on their children's education and wages. Equation (4) further discusses the parents' influences on their children's education and wages, if the parents were Communist Party members and also experienced the Cultural Revolution during school years.

## 4. Data sources and empirical results

### 4.1. Data source

Before the 1980s, China's labor force had been resettled by the state, and the wage levels of various occupations in the labor market were restricted to a certain extent by the government. After the 1980s, with the development of China's economy and opening up, the labor market began to change. The difference in economic development between urban and rural areas has caused a large number of rural laborers to transfer to urban development; and market labor compensation has begun to show differences due to price level, economic conditions, and market information. Since 2004, China has implemented the minimum wage system in various regions. The minimum wage level is determined according to the living expenses of local urban residents, social insurance contributions paid by individual employees, housing provident funds, average wages of employees, unemployment rates, and economic development levels. In 2012, the 18 National Congress of the Communist Party of China decided to deepen income distribution system reforms so that everybody could share in the fruits of development. In 2014, the State Council published the Opinions on Carrying on the Reform of Household Registration System, which kicked off reforms in the Hukou System. Millions of migrant workers started to settle in towns, cities and metropolitan areas where they had been working for many years. China's segmented labour market started to move toward integration. Market-oriented reform in the employment system, with its goal of establishing an orderly, flexible, and effective labour market mechanism, was one of the most important moves in China's economic transition. The reform has undoubtedly been successful in both boosting market vitality and improving economic efficiency (Zhao, Zhao, Chou, & Leivang, 2019).

This study gets access to the individual database of the Chinese General Social Survey (CGSS), which was published by the National Survey Research Center at Renmin University of China (NSRC). CGSS data have been collected yearly since 2003, from Chinese counties (districts), streets (townships, towns), homes (villages), people's committees, families, and individuals. It is a large-scale social survey database with open access, and it aims to systemically and regularly collect information about the Chinese citizens and Chinese society, and summarize the long-term trends of social changes and related social issues, for government decision-making and international research. The data are mainly collected through investigation and aggregation of household information conducted by members of social survey networks in China, such as universities and research institutions. For the purpose of this study, CGSS surveys for families and laborers can provide us with an empirical evaluation of natural experiments across China. In this study, we collect the personal characteristics of workers such as salary, education, job, and family structure. In addition, we also consider their parents' characteristics such as parents' birth, education, work status, and whether they are members of the party. A total of 7,459 valid empirical samples were included in the present study, and the definitions and descriptive statistics of the related variable are summarized in Table 1.

The 10-year Cultural Revolution can be divided into three stages: (1) from the inception of the 1966 Cultural Revolution to the Chinese Communist Party Ninth Party Congress in 1969; (2) the Communist Party of China's Ninth Party Congress in 1970 and the Tenth Party Congress in 1973; (3) the Tenth Party Congress to the arrest of the gang of four in 1976 (Deng & Treiman, 1997; Meng & Gregory, 2002). As a result of the deterioration of the Chinese education system during the Cultural Revolution, a generation of people born between 1947 and 1963 had experienced academic disruption to different degrees (Meng & Zhao, 2013, 2016). According to the stages of the Cultural Revolution's development and its influences on various birth cohorts, the study divided the laborers' parents into three generational cohort groups: 1947–1956, 1950–1960, and 1954–1963. This step eases the interpretation of group comparison and analysis of whether people born in different periods, under the influences of the Cultural Revolution at different stages, had different influences on the education and wage levels of their children. In Table 1, it shows that the proportions of laborers born with fathers (mothers) in the birth periods 1947–1956, 1950–1960, and 1954–1963 are 19%, 19% and 15% (21%, 21%, and 17%), respectively. Second, the percentage of laborers' father (mother) with an education level of primary school and above is 27% (18%). In terms of the labors' mothers, only 3% of them were Communist Party members, compared with 18% of their fathers as Communist Party members. With regard to the status of employment, during the laborers' childhood, 6% of the fathers and 1% of the mothers had served as senior executives.

## 4.2. Empirical results

The empirical results are presented in Tables 2–7. Table 2 shows the results conducted from equation (3). First, the results show that variables such as the numbers of the laborers' siblings, being male, residing in the metropolitan area, residing in

**Table 1.** Descriptive statistics.

| Variable | Definition | Observation | Mean | Min | Max |
|---|---|---|---|---|---|
| wage | Labor's annual salary in 2011. (Unit: RMB) | 4603 | 22361.721 | 0 | 983000 |
| exp | Years in labor market | 4603 | 18.967 | 0 | 69 |
| contract | 1 if the labor has formal contract, 0 otherwise | 4603 | 0.416 | 0 | 1 |
| public | 1 if the labor is public officials, 0 otherwise | 4603 | 0.307 | 0 | 1 |
| kids | Labor's kids | 4603 | 0.618 | 0 | 5 |
| eduyear | Labor's education year | 7459 | 10.232 | 0 | 18 |
| bro_sis | Labor's siblings | 7459 | 0.089 | 0 | 4 |
| male | 1 if the labor is male, 0 otherwise | 7459 | 0.522 | 0 | 1 |
| urban | 1 if the labor lives in the urban area, 0 otherwise | 7459 | 0.665 | 0 | 1 |
| coastal | 1 if the labor lives in coastal province, 0 otherwise | 7459 | 0.429 | 0 | 1 |
| municipality | 1 if the labor lives in metropolitan area, 0 otherwise | 7459 | 0.169 | 0 | 1 |
| faedu | 1 if labor's father has primary or higher educational degree, 0 otherwise | 7459 | 0.274 | 0 | 1 |
| facommunist | 1 if labor's father is communist, 0 otherwise | 7459 | 0.184 | 0 | 1 |
| fajob | Labor's father was in charge of high-level management when labor was in childhood, 0 otherwise | 7459 | 0.065 | 0 | 1 |
| faborn1947_63 | The birth of labor's father between the years 1947 and 1963 = 1 (dummy) | 7459 | 0.292 | 0 | 1 |
| faborn1947_56 | The birth of labor's father between the years 1947 and 1956 = 1 (dummy) | 7459 | 0.194 | 0 | 1 |
| faborn1950_60 | The birth of labor's father between the years 1950 and 1960 = 1 (dummy) | 7459 | 0.192 | 0 | 1 |
| faborn1954_63 | The birth of labor's father between the years 1954 and 1963 = 1 (dummy) | 7459 | 0.151 | 0 | 1 |
| ddfa1947_63 | faedu* faborn1947_63 (dummy) | 7459 | 0.132 | 0 | 1 |
| ddfa1947_56 | faedu* faborn1947_56 (dummy) | 7459 | 0.073 | 0 | 1 |
| ddfa1950_60 | faedu* faborn1950_60 (dummy) | 7459 | 0.085 | 0 | 1 |
| ddfa1954_63 | faedu* faborn1954_63 (dummy) | 7459 | 0.083 | 0 | 1 |
| dddfa1947_63 | facommunist *faedu* faborn1947_63 (dummy) | 7459 | 0.025 | 0 | 1 |
| dddfa1947_56 | facommunist *faedu* faborn1947_56 (dummy) | 7459 | 0.018 | 0 | 1 |
| dddfa1950_60 | facommunist *faedu* faborn1950_60 (dummy) | 7459 | 0.018 | 0 | 1 |
| dddfa1954_63 | facommunist *faedu* faborn1954_63 (dummy) | 7459 | 0.012 | 0 | 1 |
| moedu | 1 if labor's mother has primary or higher educational degree, 0 otherwise | 7459 | 0.185 | 0 | 1 |
| mocommunist | 1 if labor's mother is communist, 0 otherwise | 7459 | 0.035 | 0 | 1 |
| mojob | Labor's mother was in charge of high-level management when labor was in childhood, 0 otherwise | 7459 | 0.010 | 0 | 1 |
| moborn1947_63 | The birth of labor's mother between the years 1947 and 1963 = 1 (dummy) | 7049 | 0.323 | 0 | 1 |
| ddmo1947_63 | moedu*moborn1947_63 (dummy) | 7049 | 0.094 | 0 | 1 |
| dddmo1947_63 | mocommunist *moedu* moborn1947_63 (dummy) | 7049 | 0.006 | 0 | 1 |

Source: 2012 CGSS.

coastal provinces had significantly positive effects on the numbers of their schooling years. Learning networks represented by the number of siblings may lead individuals having additional learning capital to further enhance their human capital accumulation scale (Coleman, 1990). Male labors and labors living in the metropolitan areas and coastal areas had relative advantages in human capital development. Second, in early education research theory, Blau and Duncan (1967) pointed out that the education and professions of parents could affect the education levels of individuals, and the education levels of individuals would in turn affect the quality of their first jobs, and thus affect their future professional status. In line with this

**Table 2.** Results 1.

| | eduyear | | | |
|---|---|---|---|---|
| | OLS 1 | OLS 2 | OLS 3 | OLS 4 |
| bro_sis | 0.985*** | 1.130*** | 1.082*** | 0.931*** |
| | (0.123) | (0.124) | (0.123) | (0.124) |
| male | 1.004*** | 0.983*** | 0.976*** | 0.972*** |
| | (0.085) | (0.086) | (0.085) | (0.085) |
| urban | 3.388*** | 3.436*** | 3.424*** | 3.407*** |
| | (0.094) | (0.095) | (0.094) | (0.094) |
| coastal | 0.972*** | 0.959*** | 0.971*** | 0.959*** |
| | (0.087) | (0.088) | (0.088) | (0.088) |
| fajob | 1.569*** | 1.465*** | 1.511*** | 1.501*** |
| | (0.188) | (0.190) | (0.189) | (0.189) |
| facommunist | 1.117*** | 1.126*** | 1.119*** | 1.149*** |
| | (0.119) | (0.121) | (0.120) | (0.120) |
| faedu | 2.038*** | 2.345*** | 2.127*** | 1.976*** |
| | (0.127) | (0.112) | (0.114) | (0.112) |
| faborn1947_63 | 1.860*** | | | |
| | (0.120) | | | |
| ddfa1947_63 | −0.634*** | | | |
| | (0.201) | | | |
| faborn1947_56 | | 1.466*** | | |
| | | (0.135) | | |
| ddfa1947_56 | | −1.093*** | | |
| | | (0.229) | | |
| faborn1950_60 | | | 1.868*** | |
| | | | (0.141) | |
| ddfa1950_60 | | | −0.728*** | |
| | | | (0.225) | |
| faborn1954_63 | | | | 2.007*** |
| | | | | (0.173) |
| ddfa1954_63 | | | | −0.578** |
| | | | | (0.247) |
| Constant | 5.623*** | 5.771*** | 5.747*** | 5.858*** |
| | (0.0965) | (0.0970) | (0.0958) | (0.0947) |
| N | 7459 | 7459 | 7459 | 7459 |
| R-square | 0.326 | 0.310 | 0.319 | 0.317 |

SEs in parentheses.
*$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.
*Source*: this study.

argument, fathers' work status (Beta = 1.569), political orientations (Beta = 1.569), and education levels (Beta = 1.569) had significantly positive impact on the laborers' education levels.

In predicting labors' education years, there is a significantly negative interaction (Beta = −0.634) between the education level of laborer's father (faedu) and their schooling during the Cultural Revolution (faborn1947_63). This indicates that compared with other groups, the laborer's educational achievement is relatively low if their father's schooling years was during the Cultural Revolution. OLS 2–OLS 4 also show significantly negative effects when the laborer's father was in school but in different schooling stages during the Cultural Revolution.

In Table 3, the logarithm of laborers' wage was taken as a dependent variable to explore the impacts of the explanatory variables. Take OLS 1 in Table 3 for example, labors' educated years had a significantly positive effect (Beta = 0.237) on their wages, indicating that a high number of schooling years brings the labors more human capital to their wages. Second, the laborers' cumulative experiences also had a

**Table 3.** Results 2.

| | log(wage) | | | |
|---|---|---|---|---|
| | OLS 1 | OLS 2 | OLS 3 | OLS 4 |
| eduyear | 0.237*** | 0.237*** | 0.239*** | 0.244*** |
| | (0.017) | (0.017) | (0.017) | (0.017) |
| exp | 0.163*** | 0.160*** | 0.162*** | 0.154*** |
| | (0.017) | (0.017) | (0.018) | (0.018) |
| exp square | −0.005*** | −0.005*** | −0.005*** | −0.005*** |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| male | 2.188*** | 2.191*** | 2.185*** | 2.181*** |
| | (0.118) | (0.118) | (0.118) | (0.118) |
| contract | 0.540*** | 0.543*** | 0.545*** | 0.560*** |
| | (0.131) | (0.131) | (0.131) | (0.131) |
| kids | 0.864*** | 0.851*** | 0.909*** | 0.970*** |
| | (0.095) | (0.094) | (0.093) | (0.091) |
| public | −2.130*** | −2.120*** | −2.136*** | −2.147*** |
| | (0.139) | (0.138) | (0.139) | (0.139) |
| urban | −0.865*** | −0.865*** | −0.851*** | −0.849*** |
| | (0.150) | (0.150) | (0.150) | (0.150) |
| coastal | −0.291** | −0.298** | −0.284** | −0.282** |
| | (0.118) | (0.118) | (0.118) | (0.118) |
| fajob | 0.182 | 0.207 | 0.183 | 0.167 |
| | (0.231) | (0.230) | (0.230) | (0.230) |
| facommunist | 0.713*** | 0.711*** | 0.715*** | 0.701*** |
| | (0.156) | (0.156) | (0.156) | (0.156) |
| faedu | 0.346** | 0.245 | 0.240 | 0.202 |
| | (0.174) | (0.160) | (0.159) | (0.152) |
| faborn1947_63 | 0.655*** | | | |
| | (0.188) | | | |
| ddfa1947_63 | −0.583** | | | |
| | (0.282) | | | |
| faborn1947_56 | | 0.774*** | | |
| | | (0.193) | | |
| ddfa1947_56 | | −0.341 | | |
| | | (0.302) | | |
| faborn1950_60 | | | 0.566*** | |
| | | | (0.209) | |
| ddfa1950_60 | | | −0.384 | |
| | | | (0.311) | |
| faborn1954_63 | | | | 0.026 |
| | | | | (0.272) |
| ddfa1954_63 | | | | −0.122 |
| | | | | (0.373) |
| Constant | | | | |
| | 3.207*** | 3.245*** | 3.237*** | 3.328*** |
| N | 4603 | 4603 | 4603 | 4603 |
| R-square | 0.289 | 0.290 | 0.289 | 0.287 |

SEs in parentheses.
*$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.
*Source*: this study.

positive impact (Beta =0.163) on their remunerations, albeit diminishing marginal influences (Beta = -0.005). In addition, male workers (Beta = 2.188), those with signed formal contract (Beta =0.540), and those with children at home (Beta = 0.864), enjoyed relatively higher salaries whereas the wages of laborers in the public sector are relatively low (Beta = −2.130). Table 3 also shows similar results, where the labor's wage is a strain variable and the effect each explanatory variable is estimated. The laborer with a father experienced the Cultural Revolution during schooling wage had a significantly lower wage (−0.583) than other groups. The other

**Table 4.** Results 3.

| | eduyear | | | |
|---|---|---|---|---|
| | OLS 1 | OLS 2 | OLS 3 | OLS 4 |
| bro_sis | 0.994*** | 1.165*** | 1.104*** | 0.938*** |
| | (0.123) | (0.124) | (0.123) | (0.124) |
| male | 1.013*** | 0.987*** | 0.980*** | 0.976*** |
| | (0.085) | (0.086) | (0.085) | (0.085) |
| urban | 3.383*** | 3.440*** | 3.423*** | 3.403*** |
| | (0.0938) | (0.0948) | (0.0942) | (0.0944) |
| coastal | 0.975*** | 0.961*** | 0.972*** | 0.962*** |
| | (0.087) | (0.088) | (0.088) | (0.088) |
| fajob | 1.533*** | 1.442*** | 1.493*** | 1.485*** |
| | (0.189) | (0.191) | (0.190) | (0.190) |
| facommunist | 1.287*** | 1.231*** | 1.221*** | 1.230*** |
| | (0.128) | (0.126) | (0.126) | (0.124) |
| faedu | 1.866*** | 2.149*** | 1.992*** | 1.883*** |
| | (0.102) | (0.100) | (0.100) | (0.101) |
| faborn1947_63 | 1.713*** | | | |
| | (0.099) | | | |
| dddfa1947_63 | −1.115*** | | | |
| | (0.305) | | | |
| faborn1947_56 | | 1.187*** | | |
| | | (0.113) | | |
| dddfa1947_56 | | −1.189*** | | |
| | | (0.361) | | |
| faborn1950_60 | | | 1.666*** | |
| | | | (0.114) | |
| dddfa1950_60 | | | −1.013*** | |
| | | | (0.357) | |
| faborn1954_63 | | | | 1.796*** |
| | | | | (0.128) |
| dddfa1954_63 | | | | −0.923** |
| | | | | (0.415) |
| Constant | 5.626*** | 5.793*** | 5.758*** | 5.864*** |
| | (0.096) | (0.097) | (0.096) | (0.095) |
| N | 7459 | 7459 | 7459 | 7459 |
| R-square | 0.326 | 0.309 | 0.319 | 0.317 |

SEs in parentheses.
*p $<$.1, **p $<$ 0.05, ***p $<$ 0.01.
*Source*: this study.

interactions (e.g., ddfa1947_56, ddfa1950_60, and ddfa1954_63) were negative but not significant. Empirical results show that if the parents encountered the Cultural Revolution during their schooling stage, their children's wage levels would be relatively lower than those of other groups.

## 4.3. Next generation of communist party members

In Tables 2 and 3, we found that parents who had experienced the Cultural Revolution during schooling had a significant negative impact on their children's education and wages in the current labor market. In the next step, we explored the influence of the Cultural Revolution for labors born in a family with Communist Party members. For OLS 1 in Table 4, an additional variable dddfa1947_63 is added, which is similar with the interaction term ddfa1947_63 in Table 2 but further controls the character of the father's political inclination (facommunist). This interaction had a significantly negative impact (−1.115) on the laborer's education

**Table 5.** Results 4.

| | log(wage) | | | |
|---|---|---|---|---|
| | OLS 1 | OLS 2 | OLS 3 | OLS 4 |
| eduyear | 0.237*** | 0.236*** | 0.238*** | 0.244*** |
| | (0.017) | (0.017) | (0.017) | (0.017) |
| exp | 0.164*** | 0.160*** | 0.162*** | 0.153*** |
| | (0.018) | (0.017) | (0.017) | (0.018) |
| exp square | −0.005*** | −0.005*** | −0.005*** | −0.005*** |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| male | 2.202*** | 2.197*** | 2.193*** | 2.189*** |
| | (0.118) | (0.118) | (0.118) | (0.118) |
| contract | 0.532*** | 0.540*** | 0.541*** | 0.556*** |
| | (0.131) | (0.131) | (0.131) | (0.131) |
| kids | 0.875*** | 0.857*** | 0.912*** | 0.963*** |
| | (0.095) | (0.094) | (0.092) | (0.091) |
| public | −2.117*** | −2.117*** | −2.131*** | −2.146*** |
| | (0.139) | (0.138) | (0.139) | (0.139) |
| urban | −0.868*** | −0.863*** | −0.852*** | −0.856*** |
| | (0.150) | (0.150) | (0.150) | (0.150) |
| coastal | −0.282** | −0.295** | −0.282** | −0.280** |
| | (0.118) | (0.118) | (0.118) | (0.118) |
| fajob | 0.156 | 0.192 | 0.162 | 0.128 |
| | (0.232) | (0.231) | (0.231) | (0.231) |
| facommunist | 0.838*** | 0.767*** | 0.789*** | 0.783*** |
| | (0.166) | (0.162) | (0.162) | (0.160) |
| faedu | 0.197 | 0.187 | 0.180 | 0.215 |
| | (0.142) | (0.140) | (0.140) | (0.140) |
| faborn1947_63 | 0.529*** | | | |
| | (0.163) | | | |
| dddfa1947_63 | −0.901** | | | |
| | (0.405) | | | |
| faborn1947_56 | | 0.704*** | | |
| | | (0.164) | | |
| dddfa1947_56 | | −0.576 | | |
| | | (0.456) | | |
| faborn1950_60 | | | 0.484*** | |
| | | | (0.175) | |
| dddfa1950_60 | | | −0.769 | |
| | | | (0.478) | |
| faborn1954_63 | | | | 0.086 |
| | | | | (0.208) |
| dddfa1954_63 | | | | −1.311** |
| | | | | (0.599) |
| Constant | 3.195*** | 3.241*** | 3.232*** | 3.324*** |
| | (0.235) | (0.233) | (0.234) | (0.235) |
| N | 4603 | 4603 | 4603 | 4603 |
| R-square | 0.289 | 0.290 | 0.289 | 0.288 |

SEs in parentheses.
*p < 0.1, **p < 0.05, ***p < 0.01.
*Source*: this study.

year. This indicates that compared with other groups, the laborer's educational achievement is relatively low if their father's schooling was during the Cultural Revolution. This negative interaction further shows that the laborer's education year is even shorter than others if their father is a Chinese Communist and experiences the Cultural Revolution during school-age. The rest of the results in Table 4 also show similar patterns. The interactions (dddfa1947_56, dddfa1950_60 and dddfa1954_63) all had significantly negative effects (−1.189, −1.103 and −0.923) on laborer's education years.

**Table 6.** Results 5.

| | eduyear | | | |
|---|---|---|---|---|
| | Municipality | | Non-Municipality | |
| | OLS 1 | OLS 2 | OLS 3 | OLS 4 |
| bro_sis | 0.609** | 0.598** | 1.092*** | 1.109*** |
| | (0.303) | (0.303) | (0.133) | (0.132) |
| male | 0.234 | 0.242 | 1.198*** | 1.207*** |
| | (0.179) | (0.179) | (0.094) | (0.094) |
| urban | 6.453*** | 6.404*** | 2.978*** | 2.980*** |
| | (0.400) | (0.400) | (0.099) | (0.099) |
| coastal | 0.652*** | 0.659*** | 0.828*** | 0.831*** |
| | (0.194) | (0.193) | (0.067) | (0.098) |
| fajob | 1.364*** | 1.306*** | 1.491*** | 1.474*** |
| | (0.309) | (0.311) | (0.225) | (0.225) |
| facommunist | 0.735*** | 0.927*** | 1.196*** | 1.357*** |
| | (0.235) | (0.252) | (0.134) | (0.144) |
| faedu | 1.466*** | 1.383*** | 2.150*** | 1.869*** |
| | (0.243) | (0.202) | (0.144) | (0.115) |
| faborn1947_63 | 2.405*** | 2.280*** | 1.892*** | 1.671*** |
| | (0.296) | (0.218) | (0.130) | (0.109) |
| ddfa1947_63 | −0.454 | | −0.889*** | |
| | (0.424) | | (0.225) | |
| dddfa1947_63 | | −1.129* | | −1.092*** |
| | | (0.592) | | (0.343) |
| Constant | 4.526*** | 4.550*** | 5.582*** | 5.598*** |
| | (0.380) | (0.378) | (0.102) | (0.102) |
| N | 1259 | 1259 | 6200 | 6200 |
| R-square | 0.348 | 0.349 | 0.302 | 0.301 |

SEs in parentheses.
*$p < 0.1$, **$p < 0.05$, ***$p < 0.01$.
*Source*: this study.

In Table 5, the effects of independent variables on payroll are further explored. Similarly, it can be seen that the effects and directions of most of the independent variables (e.g., eduyear, exp, exp square, male, contract, kids, public, urban, coastal, fajob, facommunist, and faedu) are consistent with those presented in Tables 4. The interaction term dddfa always showed negative effects, indicating that labors with Communist Party member parents who experienced the Cultural Revolution during school years, had lower wages in the current labor market.

## 4.4. Regional differences

We further explored the effects of the Cultural Revolution across different regions. The Cultural Revolution firstly began in Beijing, followed by the establishment of the "Gang of Four" in Shanghai. In general, the development of the Cultural Revolution and its far-reaching influences were closely related to the political and economic center of China at the time. It is interesting to study whether the parents who were attending schools in municipalities during the Cultural Revolution and whether the interruption of their educations had greater impact on their children's performances in the labor market than in other areas. In Tables 6 and 7, the samples are divided into two groups, the municipalities and non-municipalities groups. First, it can be seen that effects of different variables on the years of schooling remain similar to the

**Table 7.** Results 6.

| | log(wage) | | | |
|---|---|---|---|---|
| | Municipality | | Non-Municipality | |
| | OLS 1 | OLS 2 | OLS 3 | OLS 4 |
| eduyear | 0.300*** | 0.298*** | 0.225*** | 0.225*** |
| | (0.046) | (0.046) | (0.018) | (0.018) |
| exp | 0.168*** | 0.166*** | 0.173*** | 0.175*** |
| | (0.052) | (0.052) | (0.019) | (0.019) |
| exp square | −0.004*** | −0.004*** | −0.005*** | −0.006*** |
| | (0.001) | (0.001) | (0.001) | (0.0001) |
| male | 1.991*** | 2.020*** | 2.119*** | 2.135*** |
| | (0.293) | (0.293) | (0.129) | (0.129) |
| contract | 1.006*** | 1.001*** | 0.456*** | 0.445*** |
| | (0.321) | (0.321) | (0.144) | (0.144) |
| kids | 2.059*** | 2.039*** | 0.710*** | 0.731*** |
| | (0.328) | (0.327) | (0.0975) | (0.0970) |
| public | −2.676*** | −2.672*** | −1.755*** | −1.744*** |
| | (0.310) | (0.310) | (0.157) | (0.157) |
| urban | −0.737 | −0.742 | −0.758*** | −0.757*** |
| | (0.920) | (0.917) | (0.149) | (0.149) |
| coastal | −0.367 | −0.358 | −0.142 | −0.135 |
| | (0.314) | (0.314) | (0.127) | (0.128) |
| fajob | 1.458*** | 1.394*** | −0.360 | −0.364 |
| | (0.480) | (0.483) | (0.263) | (0.264) |
| facommunist | 0.730* | 0.864** | 0.668*** | 0.782*** |
| | (0.377) | (0.400) | (0.169) | (0.180) |
| faedu | 0.163 | 0.220 | 0.478** | 0.211 |
| | (0.373) | (0.331) | (0.196) | (0.156) |
| faborn1947_63 | 0.564 | 0.710 | 0.655*** | 0.452*** |
| | (0.634) | (0.527) | (0.193) | (0.169) |
| ddfa1947_63 | 0.0453 | | −0.819*** | |
| | (0.768) | | (0.304) | |
| dddfa1947_63 | | −1.054 | | −0.827* |
| | | (1.052) | | (0.433) |
| Constant | 0.608 | 0.615 | 3.367*** | 3.358*** |
| | (1.014) | (1.013) | (0.241) | (0.241) |
| N | 891 | 891 | 3712 | 3712 |
| R-square | 0.377 | 0.377 | 0.258 | 0.257 |

SEs in parentheses.
*p < 0.1, **p < 0.05, ***p < 0.01.
*Source*: this study.

results presented in Table 6. However, comparing the effects in municipalities and non-municipalities groups, the results show that the negative impact experienced by children of the Communist Party members in the municipalities (−1.129) are greater than those in the non-municipalities (−1.092).

Finally, Table 7 present results about differences in the wages of laborers of municipalities and non-municipalities. The results indicated that the interaction terms ddfa1947_63 and dddfa1947_63 have significant effects in non-municipalities area. Combining Tables 6 and 7, it can be found that education and wage levels of the laborers whose parents had experienced the Cultural Revolution are relatively lower than those of other groups. Two plausible reasons may explain this finding. First, it may be due to the interruption of education caused by the frequent civil and martial strife in big cities during the Cultural Revolution. Another explanation is that the implementation of the "Send-Down" campaign casts a negative impact from sending youths to the fields (Zhou & Hou, 1999). Although the samples can be distinguished into the metropolitan and

suburban dwellings of current laborers, we did not know whether the parents had been sent down to the countryside. Future research may further look into this discussion.

## 4.5. Discussion

The results presented in Tables 2–7 are compared and summarized to draw a conclusion. It can be seen that the interaction terms (i.e., ddfa and dddfa) have significantly negative impacts on workers' education and wages. Additionally, the negative impact on Communist Party members is greater than those on other groups. One possible explanation of the findings is that national policy posted influence on social values about "educational standard" (Song, 2009). More specifically, the rise of extreme ideology during the Cultural Revolution asked students to confine most of their study time at school to politics, labor, and other issues. Restrictions on basic scientific knowledge undermined the education system at that time. The masses were echoing the notion that "education is useless" in society.

In contrast, before the Cultural Revolution started in China, the state had vigorously promoted basic education to encourage citizens to be more educated, and intellectuals enjoyed high social status. Similarly, after the "Reform and Opening Policy" was implemented in China, the social status of intellectuals was re-established as a main approach to maintain social mobility. In both periods, education plays a prominent role in affecting income. However, during the Cultural Revolution, a large number of intellectuals were targeted for attack and were stigmatized. With the original occupational stratification system being damaged, the close relationship between education and income is detached, and thereafter the importance of "education standard" declined. Studying the changes in mass ideology during the Cultural Revolution, Liu (2000) pointed out that after the 1970s, colleges and universities in Mainland China no longer took examination results and scientific knowledge as the basic conditions for admission, virtually reducing the importance of educational achievement. In addition, curriculum during the Cultural Revolution period drastically ignored the cultivation of scientific knowledge and encouraged students to oppose the normal teaching order at schools, which further reduced the quality of education, resulting in teachers' inability and unwillingness to teach and students' unwillingness to attend school, as well as the emergence of a socially widespread contempt for education.

We believe that the social climate during the Cultural Revolution is likely to shape school-age children's view about education in that era, which in turn affect their investment in education for their children. Moreover, for Communist Party members, the depreciation of education resulting from the Cultural Revolution was even stronger compared to the general public. After all, the impact of national policy on is more direct and far-reaching on Party members than non-Party members. In other words, for those who experienced the interruption of education during Cultural Revolution period, the incentive for reducing human capital investment for themselves and for the next generation was likely due to the depreciation of education in society. In short, the empirical results of this study reflect that the destruction of the education system and human capital during the Cultural Revolution reduced the remuneration of educational investment for those who had been involved in the

**Table 8.** Robust check, multicollinearity check for variance inflation factor (VIF).

| Mean VIF | VIF in OLS1 | VIF in OLS2 | VIF in OLS3 | VIF in OLS4 |
|---|---|---|---|---|
| Results 1 | 1.409 | 1.273 | 1.324 | 1.407 |
| Results 2 | 3.200 | 3.080 | 3.138 | 3.185 |
| Results 3 | 1.150 | 1.124 | 1.127 | 1.127 |
| Results 4 | 3.043 | 2.967 | 3.004 | 3.020 |
| Results 5 | 1.532 | 1.174 | 1.392 | 1.145 |
| Results 6 | 3.818 | 3.619 | 3.082 | 2.917 |

*Source*: this study.

**Table 9.** Robust check, empirical results with laborers' mother characteristics.

| | eduyear | | log(wage) | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| bro_sis | 1.000*** | 1.024*** | | |
| | (0.125) | (0.124) | | |
| eduyear | | | 0.230*** | 0.231*** |
| | | | (0.017) | (0.017) |
| exp | | | 0.169*** | 0.172*** |
| | | | (0.018) | (0.018) |
| exp square | | | −0.005*** | −0.005*** |
| | | | (0.001) | (0.001) |
| bro_sis | | | | |
| | | | | |
| male | 0.997*** | 0.997*** | 2.188*** | 2.186*** |
| | (0.088) | (0.088) | (0.121) | (0.121) |
| contract | | | 0.590*** | 0.588*** |
| | | | (0.134) | (0.134) |
| kids | | | 0.779*** | 0.807*** |
| | | | (0.100) | (0.099) |
| public | | | −2.116*** | −2.119*** |
| | | | (0.142) | (0.143) |
| urban | 3.459*** | 3.463*** | −0.880*** | −0.879*** |
| | (0.097) | (0.097) | (0.155) | (0.155) |
| coastal | 0.966*** | 0.966*** | −0.355*** | −0.346*** |
| | (0.090) | (0.090) | (0.121) | (0.121) |
| mojob | 2.159*** | 2.089*** | −0.143 | −0.176 |
| | (0.460) | (0.462) | (0.635) | (0.637) |
| mocommunist | 1.569*** | 1.848*** | 0.677** | 0.789* |
| | (0.249) | (0.270) | (0.315) | (0.335) |
| moedu | 2.809*** | 2.392*** | 0.889*** | 0.338** |
| | (0.155) | (0.117) | (0.228) | (0.170) |
| moborn1947_63 | 1.627*** | 1.422*** | 0.963*** | 0.731*** |
| | (0.108) | (0.096) | (0.171) | (0.158) |
| ddmo1947_63 | −1.011*** | | −1.213*** | |
| | (0.228) | | (0.329) | |
| dddmo1947_63 | | −1.711*** | | −0.711 |
| | | (0.643) | | (0.910) |
| Constant | 5.932*** | 5.977*** | 3.246*** | 3.252*** |
| | (0.099) | (0.096) | (0.241) | (0.241) |
| N | 7049 | 7049 | 4374 | 4374 |
| R-square | 0.316 | 0.314 | 0.284 | 0.282 |

SEs in parentheses.
*p < 0.1, **p < 0.05, ***p < 0.01.
*Source*: this study.

process, and indirectly affected the future wage levels of their children in the labor market. Alternatively, people who did not complete education during the Cultural Revolution may have undertaken intergenerational compensation by increasing their commitment in their children's education or, as suggested by the Gestalt psychology,

parents will enroll their children in educational learning to complete their unfulfilled childhood dreams, driving themselves to invest in their children's education to realize these desires (Liu, 2016). However, evidence from the present study shows that the negative effects of Cultural Revolution may actually outplay potential benefits from parents' lack of education, in terms of investing in their siblings' education. More specifically, a longer interruption of education of the parents during the Cultural Revolution is associated with a lower integrity of their children's education (Meng & Zhao, 2016).

### 4.6. Robust check

Finally, Table 8 presents results from the multicollinearity test on the estimation results of Tables 2–7. According to Nerlove (1963), if the Variance Inflation Factor (VIF) is greater than 10, the influence of the estimated variable collinearity is higher. The results show that all the mean VIF values are less than 10, and it could be found that collinearity does not affect the significance of the variable.

In Table 9, we apply equation (2) and extend the variables with laborers' mother personal characteristics for robust check; (i.e., we change the equation (3) and (4) to

$$Y_i = \alpha + \beta_i X + \gamma_1 mocommunist + \gamma_2 moedu + \gamma_3 moborn + \gamma_3 \begin{cases} ddmo \\ dddmo \end{cases} + \varepsilon_i). \qquad \text{The}$$

estimated results are similar to those in Tables 2–5; each explanatory variable has a significant effect on the explained variables. For example, Columns (1) in Table 9 indicates that the coefficient of variable ddmo1947_63 is −1.011 and statistically significant at the 1% level of significance under the control of the education level of laborer's mother (moedu) and the schooling period that laborer's mother were in the Cultural Revolution is relatively low. The empirical results are similar to those of Meng and Zhao (2013). If the schooling stage coincided with the Cultural Revolution, the education and learning of the next generation may have been affected.

### Conclusion

Modern China has experienced a long period of rapid economic growth and the economic development has gradually shifted from a labor-intensive stage to a new stage driving by technology-upgrade. As a result, the government has also been vigorously supporting the development of universities and educational institutions to meet the growing demand for technical personnel and professionals. Therefore, in this study, 2012 CGSS data are used to discuss whether the Cultural Revolution is still affecting Chinese laborers at present. The empirical results showed that the average education year and wage levels of laborers whose parents had finished primary education and above during the Cultural Revolution are significantly lower than those of other groups in the current labor market.

Our results showed that Cultural Revolution caused damages to the education and human capital at that time, and lowered the return on investment in education, which indirectly affected the social mobility of future generations. Although some studies have pointed out that policy in 1980s aiming at providing compensation for

labors, has alleviated the gap between the intergenerational education and income inequality of laborers (Yang & Lee, 2011; Yang & Gao, 2015), results from the present study indicate that the direct negative impacts of Cultural Revolution were larger on family with Communist Party members, compared to other groups. Thus, the offspring of Party members who received education during the Cultural Revolution are more disadvantaged in terms of education and wage levels. To summarize, the concept of "useless education" promoted by the Cultural Revolution has far-reaching negative effects on the next generation, by affecting the education-related decisions made by their parents. Moreover, this finding further indicates that the accumulation of human capital in China is still affected by the invisible social atmosphere formed during Cultural Revolution to some extent, and these effects may not be simply resolved by the profuse investment of resources into the education system.

"(Chairman) Mao wanted to remake China, …, Mao wanted to erase the old China and paint a new one. But Mao was painting on an old Chinese picture imbedded in mosaic; the rains would come, Mao's paint would be washed off, and the mosaic would appear." [1] Although the Cultural Revolution has been ended for more than 40 years, it still seems to affect modern China to some extent. At present, China is calling for a large-scale accumulation of human capital, facing the process of moving from an efficiency-driven economy to innovation-driven economy. As a result, the government has invested abundant resources in the education system to accelerate the accumulation of human capital, by improve teaching and academic research for example. However, in addition to these vigorous attempts, the present study suggests more awareness paid to the invisible influences of the Cultural Revolution, so as to actively change the social climate to scaffold the effective implementation of the policies.

## Note

1. Lee, (2000).

## Disclosure statement

No potential conflict of interest was reported by the authors.

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