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Class origin, family culture, and intergenerational correlation of education in rural China

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Class origin, family culture, and intergenerational correlation of education in rural China[*]

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Abstract

This paper examines the determinants of intergenerational correlation of education in rural China by using a data from a large survey of households. Three generations who completed education during the period from pre-1949 to the beginning of the 2000s are included. The focus is on the influence of family class status (*chengfen*) on offspring education. Our investigation suggest that family class status is still important for the intergenerational transmission of education. The offspring of landlord/rich peasant families are more likely to achieve higher educational attainment, even though parental education, family wealth, and other family characteristics are the same. The unique determinant of the intergenerational transmission of education in the postreform era is found to be an education-oriented family culture, created as an intergenerational cultural rebound against class-based social discrimination during the Maoist era. We have also found that the cultural reaction is a combination of class-specific effects with cohort-specific effects.

Keywords: education; intergenerational correlation; social class; social discrimination; family culture

JEL classification: D31; J24; N35; O15

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Summary

This paper examines the determinants of intergenerational correlation of education in rural China by using a data from a large survey of households. Three generations who completed education during the period from pre-1949 to the beginning of the 2000s are included. The focus is on the influence of family class status (*chengfen*) on offspring education.

Our empirical results suggest that family class status, which is generally believed to have become irrelevant after the 1980s, is still important for the intergenerational transmission of education. The offspring of landlord/rich peasant families are more likely to achieve higher educational attainment, even though parental education, family wealth, and other family characteristics are the same.

The unique determinant of the intergenerational transmission of education in the postreform era is found to be an education-oriented family culture, created as an intergenerational cultural rebound against class-based social discrimination during the Maoist era. This argument is supported by the finding that the degree of significance of the positive effect of landlord/rich peasant status on the education of offspring who completed education in the postreform era varies depending on social environment. The degree of significance is lower in non-multisurname villages, where class-based discrimination was supposed to be mitigated by kinship ties, than in multisurname villages.

We have also found a cohort difference in the strength of the rebound effect. The 1947–1953 birth cohort has positive attitudes toward children's education that are distinct from differences in other family characteristics including class status. This finding implies a long-term response to social events in one's adolescence, specifically, the turmoil in the education system in the mid-1960s and early 1970s. We have also found that this cohort effect is stronger in landlord/rich peasant families, who suffered from severe discrimination at that period. That is, the intergenerational cultural rebound is a compound of a class-specific effect with a cohort-specific effect.

Why, then, did rebound rather than resignation become the major form of reaction against class-based social discrimination in rural China? A common reaction of oppressed people against 'long-standing deprivation' is resignation rather than protest (Sen 1992). Our inference is that the class-based discrimination in education did not last long enough to make the oppressed group become accustomed to it.

With reference to Eastern Europe, our study presents another pattern of the intergenerational transmission of inequality in economic transition. Szelényi's 'interrupted embourgeoisement' account states that, in rural Hungary, well-off families could transmit their family resources by placing them in the education and politicoeconomic systems under the socialist regime. In rural China, there had been very few opportunities in the politicoeconomic system for well-off families to place their family resources. Instead, landlord/rich peasant families created an education-oriented family culture that positively influenced children's education after the collapse of the rural class system.

1. Introduction

This paper examines the determinants of intergenerational correlation of education in rural China by using a large survey of household data. Three generations who completed education during the period from pre-1949 to the beginning of the 2000s are included. The focus is on the influence of family class status (*chengfen*) on offspring education. Our empirical results suggest that family class status, which is generally believed to have become irrelevant after the 1980s, is still important for the intergenerational transmission of education. The offspring of landlord/rich peasant families are more likely to achieve higher educational attainment, even though parental education, family wealth, and other family characteristics are the same. The unique path for the intergenerational transmission of education in the postreform era is found to be an education-oriented family culture, created as an intergenerational cultural reaction towards class-based social discrimination during the Maoist era.

The data source for this paper is a nationally representative rural household survey conducted in 2003 by the Chinese Household Income Project, the Institute of Economics, and The Chinese Academy of Social Sciences (CASS) in collaboration with several foreign institutes (hereinafter referred to as the 2002 CASS survey). The reference year is 2002.[1] The survey covers 9200 sample households distributed in 122 counties in 22 provincial-level administrative units: Beijing, Hebei, Shanxi, Liaoning, Jilin, Jiangsu, Zhejiang, Anhui, Jiangxi, Shandong, Henan, Hubei, Hunan, Guangdong, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi, Gansu, and Xinjiang. The sampling frame for the survey was a subsample of the official rural household survey of the National Bureau of Statistics (NBS).

Common explanations for the intergenerational transmission of socioeconomic status, in addition to the direct transfer of wealth through inheritance, focus on transmission of human capital over generations (Bowles et al. 2005; Erikson and Goldthorpe 2002; Grawe and Mulligan 2002; Solon 1992). Well-off families can invest more in children's education. Another complementary trait is that wealthy parents usually have higher educational levels and parents' education directly and indirectly affects children's education (Figure 1A). Higher educational levels, then, enable children to attain higher economic status (Figure 1B).[2] It would be interesting to investigate to what degree these transmission paths of socioeconomic status are relevant in transition economies, which

have experienced the establishment of the socialist system and the collapse of that system within a few generations. We intend to investigate this issue in the context of rural China during the period from pre-1949 to the beginning of the 2000s. In the present paper, we concentrate on the intergenerational correlation of education. Then, in a forthcoming paper, we will proceed to a more comprehensive investigation of the transmission paths of family socioeconomic status by examining offspring employment status, income and wealth, political status, and other related factors.

Figure 1 Reference framework

Szelényi's 'interrupted embourgeoisement' account can be used as a reference framework for the intergenerational transmission of human capital in transition economies. Szelényi, using extensive household survey data in rural Hungary at the beginning of the 1980s, argued that the old rural bourgeoisie and other entrepreneurial families (especially 'kularks' and 'middle peasants') could exploit the new market opportunities of the mixed economy after the 1980s by placing their family resources (education, occupational skills, and so on) in the educational and politicoeconomic systems under the socialist regime. Based on the estimation of agricultural production, Szelényi also stated that the more prosperous families under collectivization and the peasant entrepreneurs who took advantage of the opening up of the market after the 1970s seemed to be the descendants of families who had been well off and entrepreneurial before the socialist transformation. That is to say, the process of 'embourgeoisement' had been interrupted during the socialist regime in rural Hungary (Szelényi 1988). From the standpoint of comparative economic transition, it will be interesting to compare rural China with rural Hungary.

We are unaware of any previous literature that directly examines the effects of family class status on offspring education using large household survey data that can represent rural China.[3] The only literature that directly relates to our study is by Deng and Treiman (1997). Deng and Treiman, using the 1982 census, claimed that the educational attainment of men is highly egalitarian with respect to social origins and has become increasingly so over time, although discrimination in education existed against sons of 'bad class origin' during the Great Cultural Revolution. They emphasize the weak association between fathers' socioeconomic status and sons' educational attainment and the existence of strong state intervention behind that. Although we acknowledge that the

intergenerational correlation in education had been weakened in general by state intervention to expand school education after 1949, both in urban and rural areas, we would emphasize the significance of the long-term influence of social discrimination.[4] Firstly, we intend to elaborate the class-based discrimination in education through estimations of the determinants of educational level by birth cohorts and by social environments that would affect the degree of class-based discrimination. Secondly, we will see what has happened to the intergenerational correlation in education in the current younger generation who completed education after the 1990s. One advantage of our study is that we asked directly about family class origin and the previous generation's educational level in the household questionnaire.

Other relevant literature includes Ting (2004), who analyzed trade-offs between quantity and quality of children in urban and rural areas, using a fertility survey conducted in Hubei, Shaanxi, and Shanghai in the mid-1980s. According to Ting, urban white-collar families had fewer, but better educated, children than their blue-collar counterparts, whereas no difference was found in lifetime reproductive strategy between families of different socioeconomic statuses in rural areas. Drawing on Ting's argument and taking into account the fact that the difference between families in the number of children is relatively small in rural China (compared with other developing counties) because of family planning policy, in this paper we do not consider the quantity–quality trade-off. Instead, we focus on the influence of the previous generation's education and class status on the next generation's education.

This paper is structured as follows. In Section 2, we discuss the framework of study, outcome measures, working hypotheses, and method of empirical analysis. In Section 3, we examine the intergenerational correlation of education by using historical birth cohorts and focusing on the significance of fathers' educational level and family class status. Then, in Section 4, we investigate the determinants of educational attainment of the current younger generation by employing family wealth and other family characteristics as well as parental education. Section 5 presents our conclusions.

2. Framework of research

Family class status

The major constraint for our study is that we have no information on the income and wealth of families in the pre-1949 era. We employ family class status (*jiating chengfen*) designated at the Land Reform period as the proxy of family socioeconomic status in the pre-1949 era.

Table 1 classifies family class status of our sample households by agricultural macroregions (*nongye quhua*).[5] In the overall sample, landlord/rich peasant, middle peasant, and poor and lower-middle peasant comprise 6.4 percent, 19.3 percent, and 74.4 percent respectively. There are no large regional differences in the class structure between agricultural macroregions and between old revolutionary regions (*laoqu*) and other regions. Note that, for this Table and the following empirical analysis, we exclude sample households located in atypical agricultural regions, specifically the Ganxin region (the northwestern part of Gansu and the whole of Xinjiang). Thus, our basic working data consist of 8362 households in 113 counties.

Table 1 Class structure by regions

A criticism will be raised that class status is a crude indicator of family socioeconomic status because the socioeconomic characteristics of a certain class (for example, landlords) vary considerably between regions and historical periods. First, there were large regional differences in the structure of land holdings prior to land reform. Second, the Communist Party's policies for defining classes have changed over time, especially before and after the establishment of the People's Republic of China in 1949. Generally, land reform during the civil war was radical and violent, whereas, after 1949, it was relatively restrained. Third, class definition was a political process rather than an economic classification and, therefore, class status was strongly affected by the specific local political contexts.[6]

Although we agree with these points, we still argue that class status is the second-best indicator of family socioeconomic status. Our rationale is as follows. First, although the economic substance of a certain class status varies over time and between regions, it is reasonable to assume that class status represents relative socioeconomic status within each of the regional units where the land reform policy had been implemented. If so, we

can standardize the class categories by grouping the sample households within an appropriate regional unit. Second, because class categories are a political label and their impact on Chinese peasants after the 1950s varies according to birth cohorts, we will be able to capture the unique characteristics of rural China's socialism and market transition by an empirical investigation using class status.

An appropriate unit for clustering households in the sample is the county level. This is because, throughout the process of land reform, the county was the basic unit for applying the Communist Party's principles and policies to actual rural circumstances. For example, the typical method for supervising the land distribution process was to dispatch work teams (*gongzuodui*) organized at the county level to villages (Crook and Crook 2003/1959; Hinton 1997/1967). Therefore, in the following empirical study, we group sample households at the county level and assume that class status represents a common socioeconomic status within a county.

The CASS 2002 survey provides information on the class statuses of the head of household's and spouse's parents. Based on this information, we adopt the following classification of family class status.

(1) Landlord/rich peasant (*dizhu*/*funong*) family. A family where either the father or mother of the head of household is of landlord/rich peasant origin. This class category represents the former 'exploitative' class, and was regarded as the 'enemy' throughout the Maoist era.

(2) Poor and lower-middle peasant (*pinxiazhongnong*) family. A family where both father and mother of the head of household are of poor and lower-middle peasant origin. They belong to the revolutionary class.

(3) Middle peasant (*zhongnong*) family. Both father and mother of the head of household are of middle peasant origin, one of the parents is of middle peasant origin and the other is poor and lower-middle peasant origin. Rich middle peasant (*fuyu zhongnong*) and some other minor middle-class categories such as small landholder (*xiao tudi chuzuzhe*) and merchant (*shangren*) are classified into middle peasant. They belong to the 'middle' class, that is, the ally of the revolutionary class.

Note that family class status is not just a proxy of socioeconomic status in the pre-1949 era. As is well known, class status was the critically important political labeling during the Maoist era (Watson 1984). Family class origin, especially the father's class origin, influenced children's education, employment, party membership, and all other

social and economic opportunities. Especially during the Great Cultural Revolution, families of landlord and rich peasant origin were, in company with 'antirevolutionaries', 'rogues', and 'right-wing factions', called the 'five blacks (*hei wulei*)' and became the main target of the class struggle.[7]

Historical cohorts

For the purpose of our study, it is important to conduct the investigation by birth cohorts. When classifying birth cohorts, we should consider the unequal accessibility to education of different classes in different historical periods. Note that, because of the large gender gap in education, we concentrate on males (male household members, male heads of household, and their fathers) in the rest of this section and Section 3 (Figure 2, Tables 3, 5, and 6). The total number of current male household members is 12 939 (Figure 2 and Table 3). Of the 8362 households that we cover in this study (Table 1), 8358 households have male heads of household (Table 5).

Figure 2A shows average years of education for all current male household members grouped into five-year birth cohorts.[8] From this figure, we can confirm that the educational level of peasants has been increasing steadily after the establishment of the People's Republic, from 5.0 years in the 1935–1939 birth cohort to 8.6 years in the 1975–1979 birth cohort. We can clearly see the expansion of school education after 1949. In addition, we find fluctuations in education level among different class origins. Landlord/rich peasant family members born in the pre-1949 era had better education, as is expected. This trend was reversed for the 1945–1949 birth cohort and the education level of landlord/rich peasant family members became lower than their middle peasant and poor/lower-middle peasant counterparts. It is clearly shown that landlord/rich peasant family members were subjected to social discrimination. It is not until the 1960–1964 birth cohort that the education level of landlord/rich peasant family members caught up with the other classes.

Figures 2B and 2C focus on the two transitional birth cohorts: the 1945–1949 cohort and the 1960–1964 cohort. In the 1945–1949 cohort, we can confirm that the proportion of male members of landlord/rich peasant families who could not complete junior high school-level education increased after 1945 (Figure 2B). In the 1960–1964 cohort, we found a type of polarization in the educational attainment of landlord/rich peasant family members. Some of the landlord/rich peasant family members began to achieve

senior high school-level education, although the proportion of those who had primary school or less educational attainment is still higher in the landlord/rich peasant family members than in others (Figure 2C). These findings suggest that, for the 1945–1949 cohort, class-based disparity in education level could be seen at the junior high school level. This was the first transitional cohort when the overall average length of education was around six years. In the second transitional cohort, the1960–1964 cohort, the overall average length of education had increased to approximately eight years, and gaining entry into senior high school became the important crossroad in educational attainment.

Figure 2 Average completed education of male household members

Thus, it will be appropriate to classify the historical birth cohorts for empirical analysis by year at age 12 (the transition from primary school to junior high school) and age 15 (the transition from junior high school to senior high school). Specifically, we classify household members into the following four historical cohorts (see Table 2).

(1) Pre-Maoist cohort. This cohort consists of those who were born before or during 1944 (age at 2002: 58–88 years). They had reached the age of 12 years before 1957, the year when the Advanced Agricultural Production Cooperatives (*gaoji nongyeshengchan hezuoshe*) had covered the entire rural area and when large political campaigns, the Rural Socialism Education Movement (*nongcun shehuizhuyi jiaoyu yundong*) and the Anti-Rightist Movement (*fan youpai yundong*), had started.

(2) Mid-Maoist cohort. This birth cohort consists of those who were born between 1945 and 1959 (age at 2002: 43–57 years). Those who belong to this cohort reached the age of 12 years after 1957 and 15 years before the end of the Great Cultural Revolution.

(3) Late-Maoist cohort. This birth cohort includes those who were born between 1960 and 1965. They reached the age of 12 years during the Great Cultural Revolution and 15 years after the Great Cultural Revolution. This cohort is a transitional cohort from the Maoist era towards Deng Xiaoping's reform era.

(4) Postreform cohort. Those who were born after 1965 are included in this birth cohort. They reached the age of 12 years after 1978, the year of transition from the Maoist period to the reform period, which is illustrated by the third plenum of the 11th Central Committee of the Communist Party of China (December 1978) and the official announcement to abolish family class origin as the measure of political accreditation (January 1979).

Table 2 Classification of historical cohorts

Table 3 Family class status and educational level of current male household members

Table 3 summarizes the association between educational level of current male household members and family class status by historical cohorts (*P* indicates the significance level of chi-square test of independence between educational level and class status). It is confirmed that the educational level of male members of landlord/rich peasant families is significantly higher in the pre-Maoist cohort ($P = 0.016$) and becomes significantly lower in the mid-Maoist cohort ($P = 0.001$). It is also found that, although not statistically significant, the proportion of landlord/rich peasant family members having nine years or above of education has caught up with other classes in the late-Maoist cohort and becomes slightly larger than poor and lower-middle peasant families in the postreform cohort.

Coverage and bias

Note that this paper does not cover those who had changed their household registration (*hukou*) from rural to urban status (*nongzhuanfei*) by entering college, becoming party/government cadres, or joining the army. Since those who were able to change household registration status in the Maoist era basically belonged to families of 'good class', it is assumed that we do not capture highly capable persons of poor and lower-middle peasant origin who had left rural areas during the Maoist era.[9] This could be a possible source of bias for our empirical analysis. However, since the numbers of rural people who had changed household registration status, especially during the Maoist era, is very limited, we think that the bias would not be very serious.

Working hypotheses

Taking the common explanations for intergenerational transmission of education and Szelényi's account into consideration, Table 4 illustrates the framework of the empirical study in this paper.

We cover three generations. The first generation (grandfather's generation) is the generation of fathers of current male heads of household. The second generation (father/parent's generation) is the generation of current male heads of household and

their spouses. The third generation (children's generation) is current younger family members living with their parents and aged over 15 and under 25 in 2002 (Table 4A).[10]

The outcome measures for offspring education are as follows: (a) years of education completed by male heads of households for the 2nd generation's educational level, and (b) dummy variable for whether or not children have entered senior high school (or equivalent schools) for the 3rd generation's educational level (Table 4B).

Table 4 Framework of the empirical study

Regarding the two intergenerational correlations of education, between the first and the second generations and between the second and the third generations, we propose the following transmission paths, working hypotheses, and measurements (Table 4C).

(1) Investment in offspring education

For the pre-Maoist cohort, we hypothesize that landlord/rich peasant families were better able to invest in education than were their middle peasant and poor/lower-middle peasant counterparts. We also assume that this transition path had been blocked by the thorough collectivization in the late 1950s (the mid-Maoist and late-Maoist cohorts) and that family wealth began to matter again after the 1980s (the postreform cohort). For measurements to examine this transmission path, we utilize family class status dummy variables (Table 5) and family wealth in 2002 (Table 8).

(2) Previous generation's educational level

The measurements for grandparent/parent's educational level are years of education completed. We hypothesize a common path of intergenerational transmission of education and expect a positive influence of grandparent/parent's education on children's education. At the same time, taking the rapid expansion of education after 1949 into consideration, we anticipate that the intergenerational correlation in education is less strong.

After considering these common transmission paths, we proceed to introduce the following two factors that we anticipate will represent the unique historical characteristics of rural China after 1949.

(3) Class system and class-based discrimination

Our inference is that, unlike the case in rural Hungary, there were few chances for well-off families in the pre-1949 era to preserve their family resources in the economic and sociopolitical system after 1949. We anticipate that, because of the strict political

stratification in the Maoist era, members of landlord/rich peasant families were heavily discriminated against in school education.

(4) Family culture

We hypothesize that, in addition to wealth and education of previous generations, other family characteristics that can be classified under the general term of family culture also matter in the intergenerational correlation of education. Our intention in this paper is to characterize family culture that is specific to rural China. Bearing in mind the drastic politicoeconomic changes and class-based opportunity structure in the Maoist era, we anticipate that we would find cohort-specific and class-specific family culture.

Estimation method

Family class status has dual meanings: as a proxy of economic status in the pre-1949 era and as a measurement of political status during the Maoist era. As discussed above, when we use class status dummy variables as proxies for economic status in the pre-1949 era, it is necessary to group sample households into appropriate clusters and introduce an estimation method for grouped observations. When we treat class status dummy variables as the indicators of political status during the Maoist era, we will be able to introduce them without a strict clustering procedure.

For the estimation method with clustering, we employ here a two-level hierarchical linear model (HLM) clustering at the county level, that is, the basic unit of land reform.[11] In this model, households are grouped into counties and county characteristics are assumed to exercise a common influence on all households within the county. The two-level HLM is structured as follows. When there exists one household level characteristic (x) and one county level characteristic (z) that influence the household level dependent variable (y), the micro (household) level model is written as:

$$y_{ij} = \beta_{0j} + \beta_{1j} x_{ij} + \underline{\varepsilon}_{ij}, \qquad (1a)$$

where $\underline{\varepsilon}$ is the micro error term, and subscript i represents the household, and j the village. The macro (county) level model that includes county characteristics (z) is described as:

$$\beta_{0j} = \gamma_{00} + \gamma_{01} z_j + \underline{\delta}_{0j}, \qquad (1b)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11} z_j + \underline{\delta}_{1j}, \qquad (1c)$$

where the subscript j indicates the county, and the δ is the macroerror term.

Substitution provides the following two-level HLM:

$$y_{ij} = \gamma_{00} + \gamma_{01} z_j + \underline{\delta}_{0j} + (\gamma_{10} + \gamma_{11} z_j + \underline{\delta}_{1j})\, x_{ij} + \underline{\varepsilon}_{ij}$$

$$= \gamma_{00} + \gamma_{10} x_{ij} + \gamma_{01} z_j + \gamma_{11} z_j\, x_{ij} + (\underline{\delta}_{0j} + \underline{\delta}_{1j}\, x_{ij} + \underline{\varepsilon}_{ij}). \qquad (2)$$

Equation (2) illustrates that the household level dependent variable y is a function of the following components: overall intercept γ_{00} that demonstrates the grand-mean effect, the main effect of county characteristics z (γ_{01}), the overall slope γ_{10} (the average x–y regression slope across county) that represents the main effect of household characteristics x, the cross-level interaction of household and county characteristics (γ_{11}), and random effects ($\underline{\delta}_{0j} + \underline{\delta}_{1j}\, x_{ij} + \underline{\varepsilon}_{ij}$).[12]

3. Intergenerational correlation of education by historical cohorts

Education of male heads of household

In this section, we examine the intergenerational correlation of education between fathers of male heads of household (fathers, the first generation) and male heads of household (sons, the second generation). The outcome measure is years of education completed by male heads of households. The focal independent variables are (a) father's educational level (years of education completed), (b) family class status (class status dummy variables), and (c) interactions between these two variables. Considering the upward trend of average educational level after 1949, we control (d) age of male heads of households. Because we treat family class status as the proxy of socioeconomic status in the pre-1949 era as well as the indicator of political status after 1949, as is explained above, we employ a two-level HLM nested at the county level. Table 5 reports the estimation results by historical cohorts. The following points can be seen from the results.

Table 5 Determinants of educational level by historical cohorts, two-level HLM estimation

First, in the pre-Maoist cohort, the positive and statistically significant relationship between landlord/rich peasant status and father's education level suggests that the positive influence of the previous generation's educational level had been enhanced in landlord/rich peasant families (equation 2 of Table 5)[13], whereas landlord/rich peasant status itself is not statistically significant (equation 1 of the table). These findings imply that the major transmission path for education in landlord/rich peasant family members is the previous generation's education rather than the family's economic status. In contrast to landlord/rich peasant families, the coefficients for middle peasant status are positive and significant both in equations 1 and 2, suggesting that middle peasant status has an independent effect on offspring education. A possible explanation for the different results between landlord/rich peasant and middle peasant families is that middle peasant families were more likely to include families who were employed in commerce and industry in the pre-1949 era and such families tended to be more interested in offspring education than were their poor/lower-middle peasant and landlord/rich peasant counterparts.

Second, in the mid-Maoist cohort, we have confirmed a negative relationship between class status and offspring education as was expected (equations 3 and 4 of the table). The coefficients for landlord/rich peasant status and its interaction with father's education have become negative and statistically significant, clearly showing the discrimination in education against landlord/rich peasant families. It is also notable that the coefficients for father's educational level had become smaller than those for the pre-Maoist cohort. This finding reflects the rapid expansion of school education in the Maoist era.

Third, in the late-Maoist cohort, the coefficient for landlord/rich peasant family returned to positive, although not statistically significant. This reflects the above-mentioned polarization in the education level of the landlord/rich peasant family members (Figure 2C) and shows the transitional characteristics of this particular cohort.

Fourth, turning to the postreform cohort, it is noteworthy that the effect of landlord/rich peasant is positive and statistically significant (equation 7 of the table). It is clearly shown that sons of landlord/rich peasant families who completed education in the postreform era are more likely to achieve higher educational level. Moreover, interaction values indicate that the effect of father's education is enhanced in

landlord/rich peasant families (equation 8 of the table). It is also notable that middle peasant status has no statistically significant effects in this birth cohort.

Intergenerational cultural rebound effect

Why, then, do male heads of households from landlord/rich peasant families belonging to the postreform cohort tend to have higher educational attainment? Our inference is that class-based discrimination in education during the Maoist era had created a psychological or cultural rebound among landlord/rich peasant family members (fathers) and they tended to have stronger incentives to encourage their sons' education after class-based discrimination was abolished at the end of 1970s (hereinafter referred to as the intergenerational cultural rebound effect).

When we employ this argument, the following opposing working hypotheses about the relationship between the degree of discrimination and the degree of cultural rebound could be made: (1) the strength of cultural rebound positively correlates with the degree of discrimination (the rebound is stronger where the previous generation suffered more greatly from discrimination) (hereinafter referred to as the proportional rebound hypothesis); and (2) the strength of rebound negatively correlates with the strength of discrimination (a cultural resignation, or fatalism, rather than rebound or protest, is likely to occur where severe discrimination existed) (hereinafter referred to as the cultural resignation hypothesis). Because we can anticipate that the attitudinal responses of individuals/families towards social discrimination are distributed randomly, here we try to test the two hypotheses outlined above by introducing the factor of social environment that affects the degree of class-based discrimination.

Specifically, we divide sample households into two groups according to the basic social environment under which they achieve education: (a) families living in non-multisurname villages, that is, villages where families with the most commonly occurring surnames comprise more than half of the total number of families; (b) families living in multisurname villages, that is, villages where families with the most commonly occurring surnames comprise less than half of the total. The assumption behind this classification is that class-based discrimination could be mitigated where a strong kinship relationship exists between landlord/rich peasant families and other families. Then, we reestimate the effect of family class status according to this typology of social environments and compare the effects for the mid/late-Maoist cohorts and the

postreform cohort. Since we group observations by village characteristics and we are interested in class status as the indicator of political status, we employ here OLS estimation instead of two-level HLM clustered at the county level. For the non-multisurname villages, we extract the landlord/rich peasant families who have the most commonly occurring surname (*daxing*) in the village in order to capture the influence of kinship relations more accurately.

The estimation results are shown in Table 6. The results seem to support the proportional rebound hypothesis: first, in the mid/late-Maoist cohorts, we have found that landlord/rich peasant status has a stronger negative effect on offspring education in multisurname villages than non-multisurname villages. This finding implies that class-based discrimination in education was likely to be more severe in multisurname villages. Second, in the postreform cohort, we found a positive and larger coefficient for landlord/rich peasant status in multisurname villages, suggesting that the cultural rebound for offspring education is stronger where discrimination during the Maoist era was more severe.

Table 6 Educational level of male heads of households of landlord/rich peasant origin, by social environment

Another factor to be considered is the stage in an individual's life cycle when she/he suffered from discrimination. By referring to the literature on lifespan development psychology and family sociology, we hypothesize that the long-term response to social discrimination is stronger when one suffers from discrimination during one's adolescence (hereinafter referred to as the adolescence hypothesis).[14] To confirm this point, we have employed a dummy variable for fathers of male heads of households who were born during 1947–1953; that is, they were aged 12–18 years when the severe 'class struggle'—the Four-Cleanup (*siqing*) Campaign and the Great Cultural Revolution—occurred. Then we extract landlord/rich peasant families and reestimate the effects of father's age, 1947–1953 birth cohort, and education level. If the adolescence hypothesis is applicable, we anticipate a positive coefficient for the 1947–1953 birth cohort dummy.

The result is shown in Table 7. It is consistent with our assumption. The 1947–1953 birth cohort coefficient is positive and significant as expected, suggesting that there was a stronger cultural rebound towards the next generation's education among fathers of

landlord/rich peasant families who had experienced the turmoil in the education system and class-based discrimination in education during their adolescence.

Table 7 Influence of father's birth cohort on educational level of male heads of household of landlord/rich peasant families, the postreform cohort, OLS

4. Determinants of educational attainment of the current younger generation

In this section, we proceed to the analysis of the intergenerational correlation of education between current male heads of households (the second generation) and their children (the third generation). We define children here as the children of male heads of households who live with their parents and who are aged over 15 and under 25 years in 2002. Children-in-law (e.g. wives of married sons) are not included. Here, we are able to elaborate on the findings of the previous section by adding new variables for family characteristics such as family economic status.

The outcome measure is the dummy variable indicating whether or not children entered senior high school (or equivalent schools). As the outcome measure is binominal, we employ logit estimation. Since we concentrate on children who have completed education since the 1990s and, therefore, family class status is regarded as the indicator of political status, it is not necessary to consider clustering of observations at the county level. Instead, we group observations for the same household and conduct a robust estimation.

Focal independent variables are as follows: (a) father's years of education completed, (b) mother's years of education completed, (c) father's school performance,[15] (d) grandfather's (father of father) years of education completed, (e) 1947–1953 birth cohort dummy variable for father, (f) father's age, and (g) family class status. To control the children's characteristics, we employ (h) children's age and (i) children's gender (dummy for male). As the proxy of long-term economic status of the family, we introduce (j) family wealth in 2002 (per capita amount of family assets, 2002).[16] To control the level of regional economic development, we employ (k) logit-transformed proportion of nonagricultural GDP to total GDP at the county level.

We also introduce the following interaction measures between family class status and other focal variables: (l) 1947–1953 birth cohort dummy and family class status, (m)

father's education and family class status, and (n) family wealth and family class status. These are to determine whether the effects of father's age, father's education, and family wealth differ according to family class status. The estimation results are summarized in Table 8. The following points can be made from this table.

Table 8 Determinants of the educational level of the current younger generation, logit estimation

First, the effects of children's age, children's gender, and the level of regional economic development are consistent with our general knowledge of rural China and with the literature on intergenerational correlation in education (equations 1–6 of Table 8). The negative and statistically significant coefficient for age reflects the improvement in the average level of education. The male dummy is positive and significant, which shows the gender gap in education. The level of regional economic development also has a significant effect, reflecting the large regional disparity in education caused by the highly decentralized fiscal system for education throughout the 1980s and 1990s.

Second, it is confirmed that family wealth has a positive and statistically significant effect on children's educational attainment as was expected (equations 1–6). This finding, along with the result of the effect of regional economic development, suggests that there will be increased disparities in educational level between different regions and between households with different economic conditions in the future.

Third, after controlling age, gender, family wealth, and the regional economic condition, the parent's, especially father's, education level significantly influences children's education (equations 1–6). Both the father's and the mother's education are proved to have positive and statistically significant effects on their children's education. It is interesting that the effect of the father's education is larger than that of the mother's. It is also notable that father's school performance positively and significantly affects his children's educational attainments. The grandfather's education also has a positive effect, although it is not statistically significant in all the equations.

Fourth, we have confirmed that the adolescence hypothesis is applicable not only for landlord/rich peasant families but also for entire families (equations 2–6). Father's 1947–1953 birth cohort dummy is positive and statistically significant, implying that this specific birth cohort has a more positive attitude towards children's education, and is distinct from differences in other family characteristics. We assume that this cohort-

specific effect reflects intergenerational cultural rebound against the turmoil in the education system during the latter half of the 1960s and the beginning of the 1970s. We can also see class-specific effects for landlord/rich peasant families by the positive and statistically significant interaction value for the 1947–1953 birth cohort and landlord/rich peasant status (equation 4).

Fifth, when all other factors are equal, family class status still has a significant effect and children of landlord/rich peasant families are likely to have higher educational attainment (equation 3). Moreover, interaction values for landlord/rich peasant status with father's education shows that the positive effect of father's education is enhanced in children of landlord/rich peasant families (equation 6).

5. Conclusion

So far, we have examined the intergenerational correlation of education in rural China, using data from a large household survey of three generations who completed their education during the period from pre-1949 to the beginning of the 2000s. It is generally believed that family class origin, which influenced almost all important life events of Chinese peasants throughout the Maoist era, had become irrelevant after the official abolition of the class system at the end of the 1970s. Contrary to this common understanding, our empirical analysis has shown that families of different class origin differ in their collective orientation to offspring education even in the postreform era. It has been found that the children of landlord/rich peasant families who have completed education after the 1990s are more likely to achieve higher educational attainment, when other family characteristics are equal.

The unique determinant of offspring education in the postreform era is an intergenerational culture within which family members act. We have found that landlord/rich peasant families tend to have a family culture characterized by a positive attitude toward offspring education. We argue that this unique family culture was created as a psychological rebound against class-based discrimination in education during the Maoist era. We call this the intergenerational cultural rebound effect. This argument is supported by the finding that the degree of significance of the positive effect of landlord/rich peasant status on the education of offspring who completed

education in the postreform era varies depending on the social environment. The degree of significance is lower in non-multisurname villages, where class-based discrimination was supposed to be mitigated by kinship ties, than in multisurname villages.

In addition to the rebound effect among landlord/rich peasant families, we have found a cohort difference in the strength of the rebound effect. The 1947–1953 birth cohort has positive attitudes toward children's education that are distinct from differences in other family characteristics including class status. This finding implies a long-term response to social events in one's adolescence, specifically, the turmoil in the education system in the mid-1960s and early 1970s. We have also found that this cohort effect is stronger in landlord/rich peasant families, who suffered from severe discrimination at that period. That is, the intergenerational cultural rebound is a compound of a class-specific effect with a cohort-specific effect.[17]

With reference to the comparison with rural Hungary, we conclude that, as far as intergenerational transmission of education is concerned, the major transmission path in rural China is different from rural Hungary, although there is a common outcome. Those who have upper- or nonrevolutionary class origin are more likely to gain advantage in education after the beginning of economic transition. As is summarized by Szelényi's 'interrupted embourgeoisement' account, in rural Hungary well-off families could transmit their family resources by placing them in the education and politicoeconomic systems under the socialist regime. In rural China, where entire rural families had experienced collectivization and repeated political campaigns until the late 1970s, there had been very few opportunities in the politicoeconomic system for well-off families to place their family resources. Instead, landlord/rich peasant families created an education-oriented family culture that positively influenced children's education after the collapse of the rural class system.

Why, then, did rebound rather than resignation become the major form of reaction against class-based social discrimination in rural China? As is emphasized in A. K. Sen's criticism of utility as a measurement of well being, a common reaction of oppressed people against 'long-standing deprivation' is resignation rather than protest (Sen 1992, 55). Our inference is that the class-based discrimination in education did not last long enough to make the oppressed group become accustomed to it. If the discrimination had continued so as to affect two generations' education and become an entrenched inequality, resignation instead of rebound might overwhelm the family

culture of the ‘bad class’ families. Such family culture could then negatively influence human capital formation and the lifelong economic status of their offspring.

Our next step is to elaborate the paths of intergenerational transmission of family resources by taking other resources such as political status, occupational skills and experiences into consideration. Specifically, we will examine how family characteristics of the previous generation including class status influence the current generation’s income and wealth. This task will be done in our forthcoming paper.[18]

References

Bengtson, Vern, Biblarz, Timothy, and Roberts, Robert E. L. 2002. *How Families Still Matter: A Longitudinal Study of Youth in Two Generations*, Cambridge: Cambridge University Press.

Bowles, Samuel, Gintis, Herbert, and Osborne-Groves, Melissa. 2005. *Unequal Chances: Family Background and Economic Success*. Princeton: Princeton University Press.

Crook, Isabel and Crook, David. 2003/1959. *Revolution In A Chinese Village: Ten Mile Inn* (International Library of Sociology), London: Routledge (reprint edition).

Davis-Friedmann, Deborah. 1985. "Intergenerational inequalities and the Chinese revolution: the importance of age-specific inequalities for the creation and maintenance of social strata within a state-socialist society." *Modern China*, 11:2, pp. 177–201.

Deng, Zhong and Treiman, Donald. 1997. "The impact of the Cultural Revolution on trends in educational attainment in the People's Republic of China." *The American Journal of Sociology*, 103:2, pp. 391–428.

Erikson, Robert and Goldthorpe, John. 2002. "Intergenerational inequality: a sociological perspective." *Journal of Economic Perspectives*, 16:3, pp. 31–44.

Grawe, Nathan and Mulligan, Casey. 2002. "Economic interpretations of intergenerational correlations." *Journal of Economic Perspectives*, 16:3, pp. 45–48.

Guojia Ditu Bianji Weiyuanhui. 1989. *Zhonghua Renmin Gongheguo Guojia Nongye Dituji* [National Agricultural Atlas of the People's Republic of China], Beijing: Zhongguo Ditu Chubanshe.

Gustafsson, Björn, Li, Shi, and Sicular, Terry (eds.) 2007. *Inequality and Public Policy in China*, New York: Cambridge University Press.

Hanley, Eric and McKeever, Matthew. 1997. "The persistence of educational inequalities in state-socialist Hungary: trajectory-maintenance versus counterselection." *Sociology of Education*, 70:1, pp. 1–18.

Hinton, William. 1997/1967. *Fanshen: A Documentary of Revolution in a Chinese Village*. Berkeley: University of California Press (reprint edition).

Huang, Philip C. C. 1995. “Rural class struggle in the Chinese revolution: representational and objective realities from the Land Reform to the Cultural Revolution.” *Modern China*, 21:1, pp. 105–143.

Kreft, Ita. and De Leeuw, Jan. 1998. *Introducing Multilevel Modeling*, Thousand Oaks, California: SAGE Publications.

Lillard, Lee and Willis, Robert. 1994. “Intergenerational educational mobility: effects of family and state in Malaysia.” *The Journal of Human Resources*, 29:4, pp. 1126–1166.

Raudenbush, Stephan. and Bryk, Anthony. 2002. *Hierarchical Linear Models: Applications and Data Analysis Methods*, Thousand Oaks, California: SAGE Publications.

Sen, Amartya. 1995/1992. *Inequality Reexamined*, Cambridge: Harvard University Press (reprint edition).

Solon, Gary. 1992. “Intergenerational Income Mobility in the United States.” The *American Economic Review*, 82:3, pp. 393–408.

Staggs, Susan and Riger, Stephanie. 2005. “Effects of intimate partner violence on low-income women’s health and employment.” *American Journal of Community Psychology*, 36: 1–2, pp. 133–145.

Szelényi, Ivan. 1988. *Socialist Entrepreneurs: Embourgeoisement in Rural Hungary*. Madison: University of Wisconsin Press.

Ting, Tih-Fen. 2004. “Resources, Fertility, and Parental Investment in Mao’s China.” *Population and Environment*, 25:4, pp. 281–297.

Unger, Jonathan. 1982. *Education under Mao*. New York: Columbia University Press.

Unger, Jonathan. 2002. *The Transformation of Rural China*. Armonk, New York: M. E. Sharpe.

Watson, James ed. 1984. *Class and Social Stratification in Post-Revolution China*. Cambridge: Cambridge University Press.

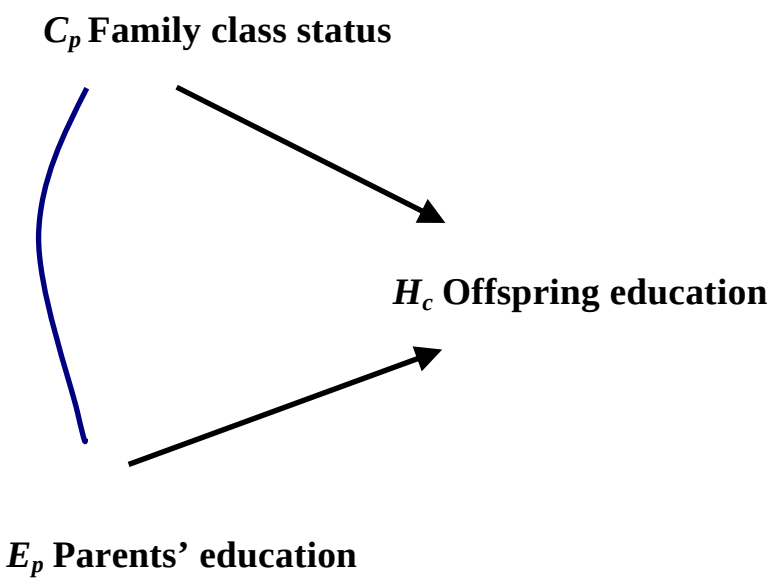
Zhang, Yongquan and Zhao, Quangou. 1985. *Zhongguo Tudi Gaigeshi* [History of the Land Reform in China]. Wuhan: Wuhan Daxue Chubanshe.

Zhang, Letian. 1998. *Gaobie Lixiang: Renmin Gongshe Zhidu Yanjiu* [Farewell to the Idea: A Study of the People’s Commune System]. Shanghai: Dongfang Chuban Zhongxin.

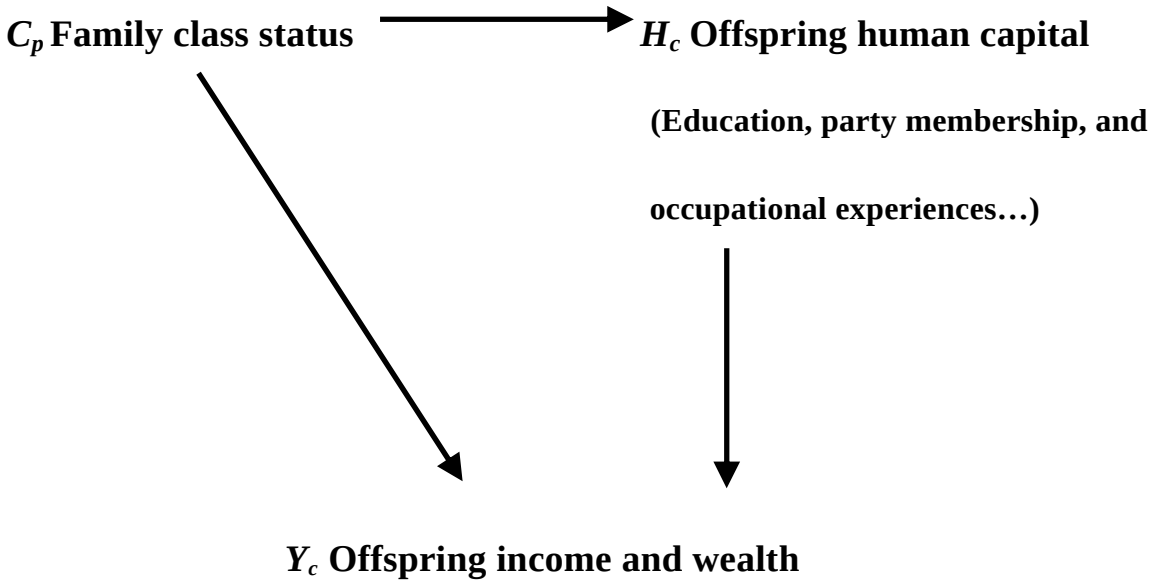
Zhou, Xueguang, Phyllis Moen, and Nancy Brandon Tuma. 1998. “Education stratification in urban China: 1949–94.” *Sociology of Education*, 71:3, pp. 199–222.

Figure 1 Reference framework

1A: Intergenerational transmission of education

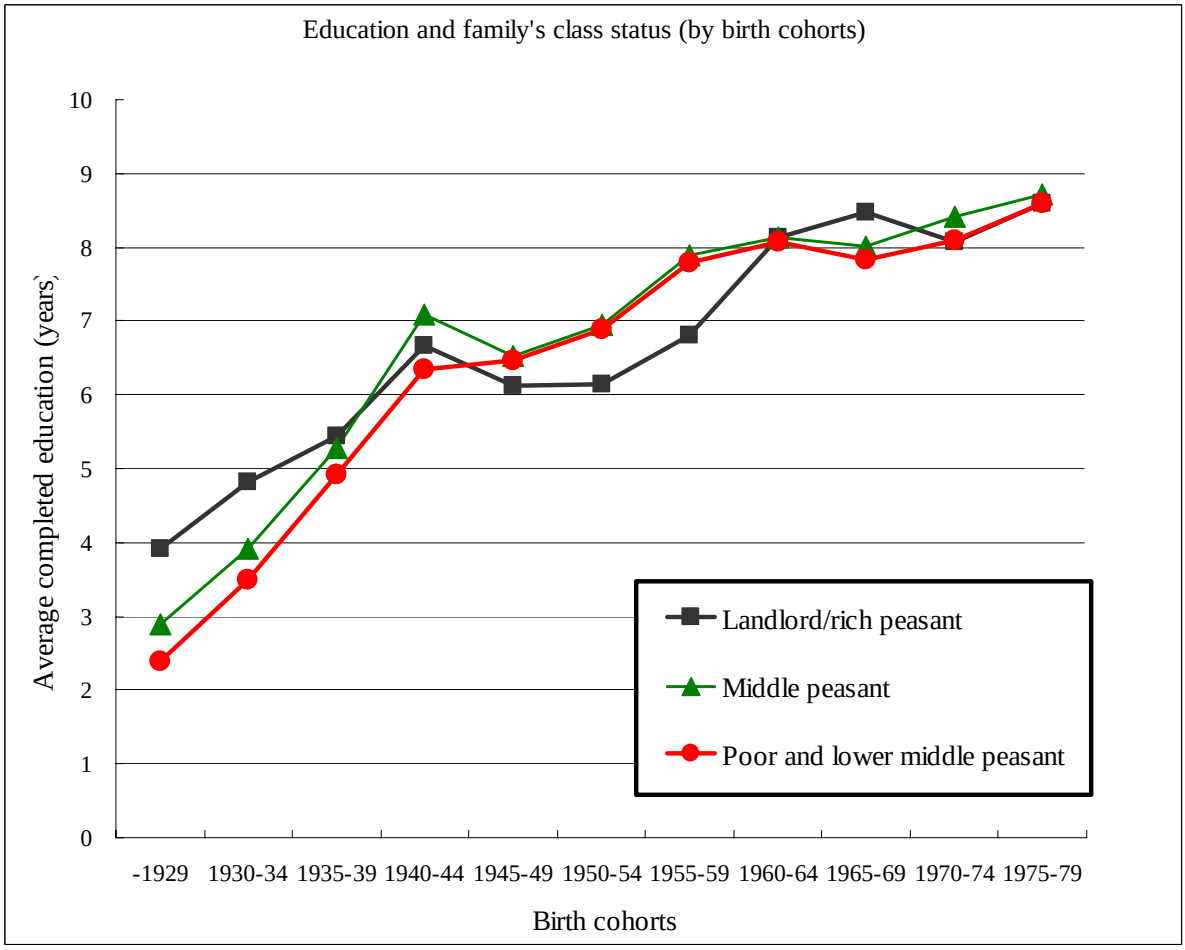


1B: Intergenerational correlation of socioeconomic status



Source: the author.

Figure 2A Average completed education of current male household members, by family class status



Note. This figure reports averages of years of education completed by all current male household members born before 1980.

Figure 2B Percentage of those who have primary school or less educational attainment, born between 1940 and 1947

Percentage of those who have primary school or less educational attainment

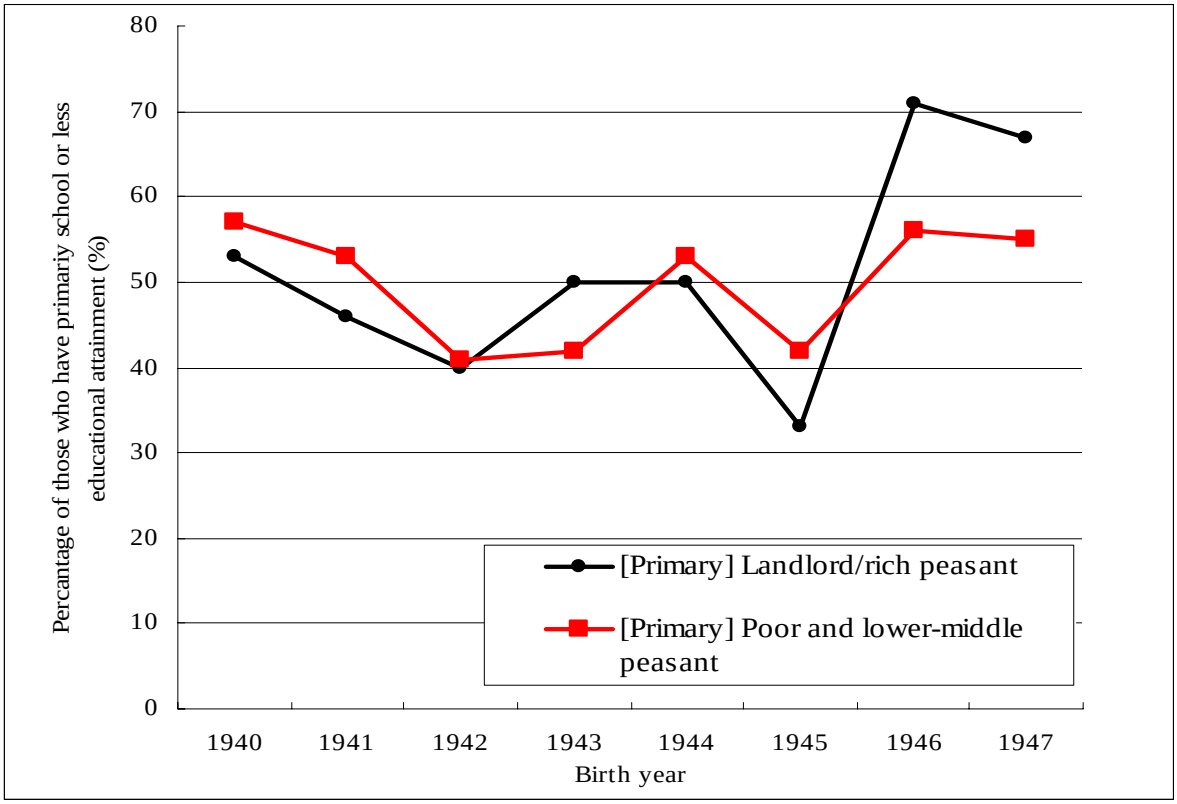


Figure 2C Percentage of those whose educational attainment is primary school or less, or senior high school or above, born between 1955 and 1962

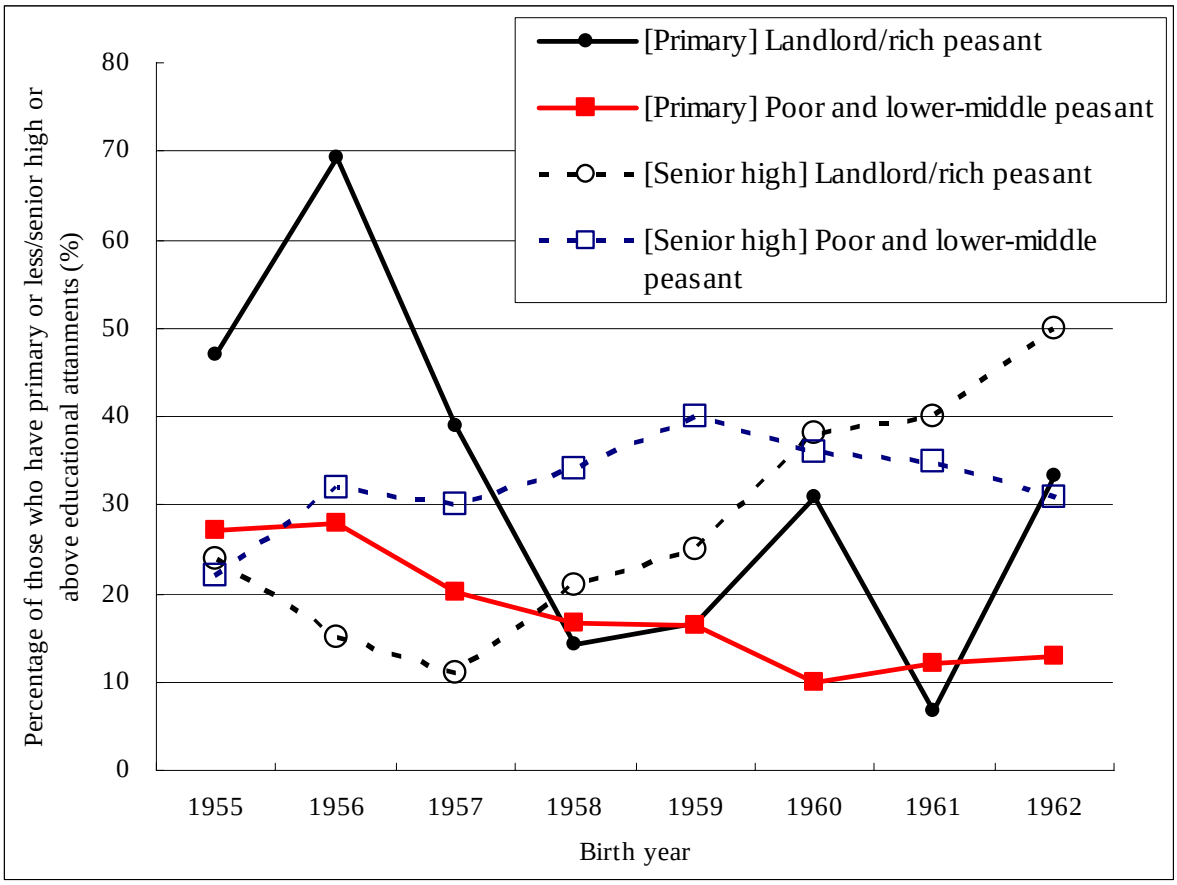


Table 1 Class structure by regions (%)

	Overall	Agricultural macroregions			
		Northeastern	Northern	Southern	Southwestern
Landlord/rich peasant status	6.4	8.0	5.8	5.6	8.4
Middle peasant status	20.2	21.4	22.4	17.1	22.8
Poor and lower-middle peasant status	73.4	70.6	71.8	77.3	68.8
Total	100.0	100.0	100.0	100.0	100.0
Number of observations (households)	(8362)	(898)	(2839)	(3335)	(1290)

Notes. For this and all subsequent tables, household data compiled from the 2002 CASS survey are used.

Old revolutionary region indicates counties where the Communist Party had its revolutionary bases before 1945. Agricultural macroregions are as follows. Northeastern: Liaoning, Jilin. Northern: Hebei, Shanxi, Shandong, Henan, Anhui (Huaibei region), Jiangsu (Huaibei region), Shaanxi, and Gansu (excluding Ganxin region). Southern: Jiangsu (Huainan region), Anhui (Huainan region), Zhejiang, Jiangxi, Hubei, Hunan, Guangdong, and Guangxi. Southwestern: Sichuan, Chongqing, Guizhou, and Yunnan. Ganxin region (the northwestern part of Gansu and the entire Xinjiang) is excluded because it is not a typical agricultural area.

Table 2 Classification of historical cohorts

No.	Birth year (age at 2002)	Year of 12th birthday	Year of 15th birthday	Historical events	Distribution of male heads of household who belong to each cohort (%)
Pre-Maoist cohort					
1.	1914–1944 (58–88)	1931–1956	1934–1959	1949: the establishment of the People's Republic	14.6 (1217)
Mid-Maoist cohort					
2.	1945–1959 (43–57)	1957–1971	1960–1974	1957: the collectivization of agriculture, the rural socialism education movement, the antirightist movement	46.9 (3924)
Late-Maoist cohort					
3.	1960–1965 (37–42)	1972–1977	1975–1980	1966–1976: the Great Cultural Revolution 1976: the destruction of the Gang of Four	19.8 (1652)
Postreform cohort					
4.	1966–1982 (20–36)	1978–1994	1981–1997	1978: the third plenum of the 11th CPC Central Committee 1979: abolition of family class origin as the measurement of political accreditation	18.7 (1565)
Total					100.0 (8358)

Notes. Number of observations (male heads of household) in parentheses. Male heads of household who were continuing education in 2002 are excluded.

Table 3 Family class status and education level of current male household members

Cohort	Landlord/rich peasant	Middle peasant	Poor and lower-middle peasant	Total
Pre-Maoist cohort				
4 years or less	34.9	35.6	43.9	41.3
5–6 years	26.9	29.0	27.3	27.6
7 years	7.4	9.4	7.8	8.1
8 years	8.1	6.0	5.2	5.6
9 years	12.1	13.3	11.2	11.7
10 years or more	10.7	6.7	4.7	5.6
Total	100.0	100.0	100.0	100.0
	(149)	(435)	(1298)	$P = 0.016$
Mid-Maoist cohort				
4 years or less	21.0	14.5	15.2	15.4
5–6 years	33.2	23.2	23.1	23.7
7 years	11.9	16.0	15.2	15.2
8 years	11.9	11.0	12.5	12.2
9 years	15.4	23.8	22.1	22.0
10 years or more	6.7	11.5	11.9	11.5
Total	100.0	100.0	100.0	100.0
	(253)	(881)	(3072)	$P = 0.001$
Late-Maoist cohort				
4 years or less	3.1	3.9	5.5	5.0
5–6 years	18.8	13.3	13.0	13.4
7 years	16.7	13.3	15.6	15.2
8 years	15.6	25.7	25.5	25.0
9 years	22.9	26.0	21.9	22.7
10 years or more	22.9	17.8	18.6	18.7
Total	100.0	100.0	100.0	100.0
	(96)	(338)	(1371)	$P = 0.273$
Postreform cohort				
4 years or less	4.1	4.6	3.8	4.0
5–6 years	12.1	12.4	13.5	13.2
7 years	4.4	6.1	7.7	7.2
8 years	28.6	25.1	26.5	26.4
9 years	29.8	33.5	31.6	31.9
10 years or more	20.9	18.3	16.8	17.4
Total	100.0	100.0	100.0	100.0
	(339)	(1032)	(3675)	$P = 0.113$

Notes. This covers current male nonstudent household members over 18 years old. Number of observations in parentheses. *P* indicates the significance level of the chi-square test of independence between family class status and education level.

Table 4 Framework of the empirical study

4A Three generations to be studied

1st generation (grandfather) Fathers of male heads of household

2nd generation (father/parent) Current male heads of household and their spouse

3rd generation (children) Current younger family members aged over 15 and under 25 years

4B Outcome measures (offspring education)

(a) 2nd generation's educational level
Male heads of household's years of education completed (years)
(b) 3rd generation's educational level
Dummy variable for whether or not children have entered senior high school (or equivalent schools)

4C Transmission paths, working hypotheses, and measurements

Transmission path	Working hypothesis Applicability to rural China	Measurements
1. Investment in offspring education	YES, in the pre-Maoist cohort NO, in the mid-Maoist and YES, in the postreform cohort	Family class status Family wealth in 2002
2. Previous generation's education	YES	Years of education completed (fathers of male heads of household, male heads of household and their spouses)
3. Class system and class-based discrimination	YES, in the mid-Maoist and the late-Maoist cohorts. What happened in the postreform cohort?	Family class status
4. Family culture	YES, there exist class-specific and cohort-specific family cultures	Family class status 1947–1953 birth cohort dummy

Table 5 Determinants of education level of male heads of household by historical cohorts, two-level HLM estimation

	Dependent variable: Male heads of household's years of education completed							
	Historical cohorts							
	Pre-Maoist		Mid-Maoist		Late-Maoist		Postreform	
Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Micro (household) level variables								
Father's years of education completed	0.205 (0.054)***	0.142 (0.062)**	0.090 (0.024)***	0.103 (0.026)***	0.048 (0.026)*	0.043 (0.028)	0.134 (0.023)***	0.125 (0.025)***
Landlord/rich peasant families (dummy)	0.302 (0.279)		–0.621 (0.164)***		0.065 (0.229)		0.514 (0.214)**	
Middle peasant families (dummy)	0.502 (0.188)***		0.116 (0.096)		0.146 (0.133)		0.085 (0.135)	
Age of male heads of household	–0.154 (0.015)***	–0.155 (0.015)***	–0.134 (0.009)***	–0.134 (0.009)***	0.115 (0.031)***	0.115 (0.031)***	0.017 (0.018)	0.016 (0.018)
Interaction values								
Father's education × landlord/rich peasant		0.095 (0.057)*		–0.109 (0.031)***		–0.018 (0.040)		0.095 (0.034)***
Father's education × middle peasant		0.127 (0.046)***		0.013 (0.022)		0.035 (0.026)		0.0007 (0.025)
Constant	14.817 (0.977)***	15.070 (0.981)***	13.319 (0.489)***	13.260 (0.491)***	3.295 (1.228)***	3.309 (1.228)***	6.693 (0.622)***	6.792 (0.622)***
Number of observations (male heads of household) Number of counties in brackets	1217 [111]	1217 [111]	3924 [113]	3924 [113]	1652 [113]	1652 [113]	1565 [113]	1565 [113]
Random effects parameters County level variance	0.574 (0.157)	0.581 (0.158)	0.964 (0.155)	0.962 (0.155)	0.452 (0.100)	0.447 (0.099)	0.426 (0.097)	0.426 (0.098)
Household level variance	6.609 (0.279)	6.598 (0.279)	5.327 (0.122)	5.331 (0.122)	3.904 (0.141)	3.904 (0.141)	3.942 (0.146)	3.937 (0.146)
Deviance	5832.651	5837.594	17935.448	17945.075	7059.707	7065.368	6699.920	6704.984

Notes. This table reports the estimation results of the effects of father's education and family class status on male head of household's education.

Two-level HLM nested at the county level. As is mentioned in the text, because we are interested in family's class status as the indicator of economic status in the pre-1949 era as well as political status after 1949, we employ two-level hierarchical linear model HLM nested at the county level. Total number of observations is 8358. Standard errors are in parentheses. *** Denotes statistically significant at the 1% level, ** at the 5% level, * at the 10% level. Because of multicollinearity, family class status dummies are omitted in equations with interaction values.

Table 6 Educational level of male heads of household of landlord/rich peasant origin, by social environment

6A Average years of education of male heads of household

	Non-multisurname villages		Multisurname villages	
	All	Landlord/rich peasant with the most commonly occurring surname in the village	All	Landlord/rich peasant
Pre-Maoist cohort	6.0	6.7	6.0	6.4
Mid/Late-Maoist cohorts	7.6	7.3	7.2	6.6
Postreform cohort	8.1	8.4	7.8	8.7

6B Effect of family class status on male heads of household's education, OLS

Dependent variable: Years of completed education of male heads of household who belong to the mid-Maoist cohort and the postreform cohort

	Mid/Late-Maoist cohorts		Postreform cohort	
Independent variables	(1) Non-multisurname villages	(2) Multisurname villages	(3) Non-multisurname villages	(4) Multisurname villages
Landlord/rich peasant families (dummy)	–0.269 (0.259)	–0.380 (0.171)**	–0.024 (0.428)	0.928 (0.269)***
Middle peasant families (dummy)	0.001 (0.150)	0.138 (0.099)	–0.010 (0.272)	0.137 (0.172)
Completed education of fathers of male heads of household (years)	0.084 (0.030)***	0.050 (0.023)**	0.130 (0.048)***	0.106 (0.029)***
Age of male heads of household	–0.096 (0.009)***	–0.116 (0.007)***	0.031 (0.033)	–0.011 (0.023)
Constant	12.409 (0.645)***	14.098 (0.500)***	9.474 (1.977)***	8.478 (1.068)***
Adjusted *R* squared	0.178	0.179	0.116	0.117
Number of observations (male heads of household)	1883	3693	473	1092

Notes. The coverage of observations is same as Table 5 (Total number of observations is 8358). Since we are interested in the influence of family class status as the indicator of political status and we need to group observations by village characteristics, we employ OLS, instead of two-level HLM nested at the county level. Standard errors are in parentheses. *** denotes statistically significant at the 1% level, ** at the 5% level, * at the 10% level.

Table 7 Influence of father's birth cohort on educational level of male heads of household of landlord/rich peasant families, the postreform cohort, OLS

Dependent variable: Years of completed education of male heads of household of landlord/rich peasant families who belong to the postreform cohort		
	(1)	(2)
Independent variables		
1947–1953 birth cohort dummy (father born in 1947–1953)	1.618 (0.570)***	1.680 (0.727)**
Age of fathers of male heads of household		–0.029 (0.048)
Age of fathers of male heads of household (squared)		0.0003 (0.0002)
Completed education of fathers of male heads of household (years)	0.224 (0.076)***	0.234 (0.077)***
Age of male heads of household	0.201 (0.077)**	0.198 (0.079)**
Constant	0.332 (2.572)	1.087 (3.430)
Number of observations (male heads of household of landlord/rich peasant families)	103	103
Adjusted *R* squared	0.158	0.154

Notes**.** Standard errors are in parentheses. *** denotes statistically significant at the 1% level, ** at the 5% level, * at the 10% level.

Table 8 Determinants of the educational level of current younger generation, logit estimation

	Dependent variable: dummy variable indicating whether or not children over 15 years old entering senior high school (or equivalent schools)					
Independent variables	(1)	(2)	(3)	(4)	(5)	(6)
Family characteristics						
Father's years of education completed	0.091	0.103	0.106	0.105	0.104	0.099
	(6.62)***	(7.34)***	(7.50)***	(7.44)***	(7.37)***	(6.94)***
Mother's years of education completed	0.056	0.064	0.064	0.063	0.064	0.064
	(4.89)***	(5.41)***	(5.43)***	(5.36)***	(5.42)***	(5.42)***
Grandfather's years of education completed	0.023	0.028	0.015	0.022	0.021	0.015
	(1.31)	(1.60)*	(0.83)	(1.28)	(1.19)	(0.83)
Father's good school performance (dummy)	0.363	0.338	0.314	0.317	0.322	0.318
	(2.39)**	(2.25)**	(2.11)**	(2.13)**	(2.15)**	(2.13)**
Father born in 1947–1953 (dummy)		0.180	0.187	0.095	0.182	0.185
		(2.18)**	(2.27)**	(1.07)	(2.21)**	(2.25)**
Father's age		–0.020	–0.021	–0.021	–0.021	–0.020
		(0.31)	(0.34)	(0.34)	(0.33)	(0.32)
Father's age squared		0.000	0.000	0.000	0.000	0.000
		(0.61)	(0.61)	(0.63)	(0.61)	(0.59)
Family wealth	0.033	0.034	0.034	0.034	0.031	0.033
	(7.74)***	(7.74)***	(7.78)***	(7.78)***	(6.97)***	(7.76)***
Individual characteristics						
Male (dummy)	0.214	0.217	0.219	0.218	0.217	0.218
	(3.80)***	(3.86)***	(3.88)***	(3.85)***	(3.85)***	(3.87)***
Age	–0.340	–0.364	–0.363	–0.364	–0.364	–0.363
	(26.56)***	(25.32)***	(25.26)***	(25.27)***	(25.31)***	(25.24)***
Regional characteristics						
Level of regional economic development	0.182	0.186	0.184	0.185	0.184	0.184
	(5.38)***	(5.52)***	(5.45)***	(5.46)***	(5.45)***	(5.45)***
Family class status						
Landlord/rich peasant family (dummy)			0.407			

			(3.13)***			
Middle peasant family (dummy)			0.131			
			(1.60)*			
Interaction values of class status						
Father born in 1947–1953 × Landlord/rich peasant family				0.610		
				(2.55)**		
Father born in 1947–1953 × Middle peasant family				0.256		
				(1.64)*		
Family wealth × Landlord/rich peasant family					0.020	
					(1.58)	
Family wealth × Middle peasant family					0.011	
					(1.62)	
Father's education × Landlord/rich peasant family						0.059
						(3.10)***
Father's education × Middle peasant family						0.018
						(1.67)*
Constant	4.685	4.991	5.033	5.049	5.036	5.057
	(17.49)***	(3.31)***	(3.32)***	(3.35)***	(3.34)***	(3.434)***
Number of observations (persons)	6566	6566	6566	6566	6566	6566
Pseudo R squared	0.159	0.162	0.164	0.163	0.163	0.164

Notes: Current younger generation is defined as children aged over 15 and under 25 years in 2002 and living with parents. Children-in-law are not included. Estimations are conducted by grouping observations of the same household. Absolute values for robust z statistics for grouped data in parentheses. *** Denotes statistically significant at the 1% level, ** significant at 5% level, * significant at 10% level.

[1] For the details of the sampling framework and sampling method, see Gustafsson, Li, and Sicular (2007).

[2] Previous studies have shown that genetic inheritance (IQ) plays a very limited role in the intergenerational transmission of economic status (Bowles et al. 2005, 9–12)

[3] For urban China, there are several previous studies, such as Zhou, Moen, and Tuma (1998).

[4] A weakening of the intergenerational correlation of education after the 1950s is common in East Asian economies. See, for example, Lillard and Willis (1994).

[5] For classification of the agricultural macroregions, see Guojia Ditu Bianji Weiyuanhui (1989).

[6] See, for example, Zhang and Zhao (1985) for changes in the reform policy and the regional variations of the reform process.

[7] The opposite of 'five blacks' is 'five reds' (*hong wulei*), which means revolutionary soldiers, revolutionary cadres, workers, poor peasants, and lower-middle peasants. For the structure of the class system and 'class struggle' in the Maoist era, see for example, Huang (1995), Watson (1984), Unger (2002), and Zhang (1998). For accounts of the discrimination in education by class origin in the Maoist era, see Unger (1982).

[8] Note that Figure 2 includes only current members of the household. Fathers of heads of household who are not current household members are not included.

[9] In the postreform era, new rural–urban mobility pathways, such as obtaining urban household registration status by purchasing real estate in an urban area, have been emerging. In the postreform era, purely economic factors, rather than political factors, mainly determine access to opportunities for changing household registration.

[10] Because of the large gender gap in education before 1949, we concentrate on the intergenerational correlation of education of male household members for simplification. Regarding the correlation between parents and children, children do not include children-in-law (wives of married sons living with parents).

[11] Details of the methodology of the hierarchical linear model are given in Kreft and De Leeuw (1998) and Raudenbush and Bryk (2002). Another method is to employ group dummies, specifically county dummies. However, employing large numbers of group dummies will not be appropriate.

[12] Equation (2) can be written as the combination of the fixed part $\mathbf{E}(y_{ij}) = \gamma_{00} + \gamma_{10}x_{ij} + \gamma_{01}z_j + \gamma_{11}z_j\,x_{ij}$, and the random part $y_{ij} - \mathbf{E}(y_{ij}) = \underline{\delta}_{0j} + \underline{\delta}_{1j}\,x_{ij} + \underline{\varepsilon}_{ij}$. As for random effects, $\underline{\delta}_{0j}$ indicates the deviation of each village from the grand mean and $\underline{\delta}_{1j}$ indicates the unique increment to the overall slope associated with village *j*. In a hierarchical linear model, the first level variables can be measured either in their original levels (raw score form) or as deviations from the county mean (group-mean centered form). We conduct estimations using equations in both raw score form and county-mean centered form. A county-mean centered first level variable $\overline{\overline{x}}_{ij}$ is equal to $\overline{\overline{x}}_{ij} = x_{ij} - \overline{x}_j$, where x_{ij} is the raw score for household *i* in county *j* and $\overline{x}_j$ is the county mean of the variable for county *j*. Both approaches are instructive. If one wants to explain as much variation in the dependent variable as possible, the raw score form is useful. If one is interested in particular county-level effects and cross-level interactions between the county and the household levels, a county-mean centered model with the reintroduction of county-mean variables is appropriate (Kreft and De Leeuw 1998). In the following empirical study, we employ the

raw score form because we are interested in whether the household level variables exercise significant effects.

[13] Because of multicollinearity, family class status is omitted in equations with interaction terms.

[14] See, for example, Bengtson et al. (2002) and Staggs and Riger (2005).

[15] Father's school performance at the junior high school (performance at the primary school if fathers do not have junior high school-level education).

[16] Family assets include total value of durable goods, housing, financial assets, and fixed assets for family production at 2002 price levels.

[17] For a general discussion on the significance of cohort-specific factors in the creation of social strata in the Maoist era, see Davis-Friedman (1985).

[18] Hanley and McKeever (1997), using large social mobility and life history surveys (1983, 1992), found another mechanism for the persistence of intergenerational inequality education in Hungary under the socialist regime, namely the strong incentive for administrators and professionals to transmit their education to their offspring. We will also examine the case in China using urban samples of the 2002 CASS survey in our future research.