

**Research Unit for Statistical
and Empirical Analysis in Social Sciences (Hi-Stat)**

**Class Origin, Family Culture, and
Intergenerational Correlation of Education in Rural China**

Hiroshi Sato
Li Shi

October 2008

Class Origin, Family Culture, and Intergenerational Correlation of Education in Rural China *

Hiroshi Sato

Graduate School of Economics, Hitotsubashi University

E-mail: satohrs@econ.hit-u.ac.jp

and

Li Shi

School of Economics and Business Administration, Beijing Normal University

E-mail: lishi89@263.net

Abstract

This paper examines the intergenerational correlation of education in rural China. The focus is on the influence of family class origin (*jiating chengfen*), the political label hung on every family throughout the Maoist era. A nationally representative cross-sectional household survey for 2002 is used. It is shown that the effects of family class origin on family members' educational attainment varies across historical periods. Regarding the educational level of male heads of household with landlord/rich peasant background, we found a drop caused by the class-based discrimination in the Maoist era and a rebound in the postreform era. It was also found that family class origin remains significant for the educational achievement of the current younger generation. Children aged 16–18 who are of landlord/rich peasant and middle peasant origins are more likely to achieve higher educational attainment. We conclude that a class-specific, education-oriented family culture has been shaped first as a mixture of family cultural capital inherited from the pre-Maoist era and surfacing again in the postreform era, and, second, as intergenerational cultural reaction against class-based discrimination during the Maoist era.

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

JEL classification: D31; J24; N35; O15

* We are grateful for helpful comments from Prof. John Knight, Oxford University, Prof. Luo Chuliang, Beijing Normal University and the Chinese Academy of Social Sciences (CASS), Prof. Naohito Abe, Hitotsubashi University, Prof. Lu Ming, Fudan University, Prof. Thomas Rawski, Pittsburg University, Mr. Hisatoshi Hoken, IDE-JETRO, and the participants of the Hi-Stat Workshop on “China's industrial structure and economic growth” organized by the Institute of Economic Research, Hitotsubashi University (September 27, 2007). We gratefully acknowledge financial support for the CHIP 2002 survey provided mainly by the Ford Foundation, the Swedish International Development Cooperation Agency (SIDA) and partly by the Japan Society for the Promotion of Science (JSPS) and Hitotsubashi University. Financial support for the preparation of this paper from JSPS (Grants-in-Aid for Scientific Research, No. 18203018), Heiwa Nakajima Foundation, and the Global COE Program “Research Unit for Statistical and Empirical Analysis in Social Sciences”, Hitotsubashi University are gratefully acknowledged. The earlier version was circulated as “Class Origin, Family Culture, and Intergenerational Correlation of Education in Rural China.” *IZA Discussion Paper Series*, No 2642, February 2007, Institute for the Study of Labor.

I. Introduction

This paper examines the determinants of intergenerational correlation of education in rural China. Three generations who completed their education during the period from before 1949 to the beginning of the 2000s are included. The focus of this study is on the influence of family class origin (*jiating chengfen*), which is generally believed to have become irrelevant after the 1980s. Our empirical results suggest that family class origin is still important for the intergenerational transmission of education.

A. Data

The data source for this paper is a nationally representative cross-sectional survey of Chinese rural households conducted in the spring of 2003 by the Chinese Household Income Project (CHIP) under the auspices of the Chinese Academy of Social Sciences. The reference year is 2002 (hereafter referred to as the 2002 CHIP survey). The survey covers 9,200 rural households distributed across 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 is a subsample of the official rural household survey conducted by the National Bureau of Statistics (NBS).¹

B. Literature Review

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 (Black 2005; Bowles et al. 2005; Erikson and Goldthorpe 2002; Grawe and Mulligan 2002; Solon 1992). Affluent families can invest more in their children's education. Furthermore, wealthy parents usually have higher educational levels, which

directly and indirectly affect their children's education (the intergenerational spillover of education).² Higher educational levels, then, enable children to attain higher socioeconomic status (see Figure 1). From the standpoint of comparative economic studies, it would be interesting to investigate to what degree these common transmission paths of education are relevant in transition economies, which have experienced the establishment and the collapse of a socialist system within a few generations. We intend to investigate this issue in the context of rural China from the preliberation period to the beginning of the 2000s. In the present paper, we concentrate on the intergenerational correlation of education. In a forthcoming paper, we will proceed to a more comprehensive investigation of the intergenerational transmission of family socioeconomic status.

Besides the wealth and education of parents, various factors (including inherited ability, family and community characteristics, and school quality) affect children's educational level. In the present paper, we focus on the contribution of family culture. We first conceptualize family as a cultural institution that promotes the socialization of children and the development of their human capital, as well as an economic unit that makes an investment in the physical and human capital of its members. Second, we define family culture as the quality of intergenerational interactions focusing on education, culture, and social experience within the family.³ Thus, offspring's educational attainment³ is considered to be affected by the quality of family culture. It is difficult to find operational measures of family culture because it is an extremely complicated concept. Our idea is to employ family class origin, a unique sociopolitical variable in the postrevolution rural China, as a proxy for the characteristics of family culture. Thus, as illustrated in Figure 1, our basic framework of analysis is to examine the influences of family class origin, parents' education, and parents' income and wealth on offspring's educational attainment.

[Insert Figure 1]

As individuals' socioeconomic status in socialist countries is to a greater or lesser extent affected by their family background, it would be interesting to compare rural China with other transitional economies. Among literature on intergenerational transmission of socioeconomic status in transition economies, we refer to Szelényi's 'interrupted embourgeoisement' theory as the framework of reference. Szelényi (1988), using extensive household survey data in rural Hungary from the beginning of the 1980s, argued that the old rural bourgeoisie and other entrepreneurial families (especially 'kulaks' and 'middle peasants') could exploit the new market opportunities of the socialist mixed economy after the 1970s by placing their family resources (education, occupational skills, and so on) in the educational and politicoeconomic systems under the socialist regime. Based on an estimation of agricultural production, Szelényi also stated that the more prosperous families under collectivization and the peasant entrepreneurs who took advantage of the liberalization of the market after the 1970s appeared to be the descendants of families who had been wealthy and entrepreneurial before the socialist transformation. That is to say, the process of 'embourgeoisement' had been interrupted during the socialist regime in rural Hungary.

Because of a lack of data, there are few previous studies that use large-scale household survey data to directly examine the effects of family class origin on offspring's education that can represent rural China. Deng and Treiman (1997), using the 1982 census, claimed that the educational attainment of men become highly egalitarian after 1949 with respect to class origins because of strong state intervention, although discrimination in education existed against sons of 'bad class origin' during the 1960s and 1970s. Although we acknowledge that intergenerational correlation in education was generally weakened in both urban and rural areas by the expansion of public education after 1949, we find a significantly different picture in this paper.⁴ First, we investigate the intergenerational correlation of education among the current younger generation, who completed their education after the 1990s, by employing

various control variables, whereas Deng and Treiman concentrated on the Maoist era. Second, we elaborate their findings regarding class-based discrimination in education by examining the long-term influence of such discrimination.⁵ Zhou, Moen, and Tuma (1998), using survey data collected from 20 cities, investigated the influences of family characteristics (father's education, father's occupation, and family class origin) on children's educational achievements from 1949 to 1994. They concluded that the effects of 'middle-class' and cadre backgrounds varied across historical periods, and that the variation pattern was not clear cut and not always consistent with state policies. Although their finding that the effects of class origin varied across historical periods is suggestive for our study, we will not refer directly to their study in the following discussion because it did not cover rural China, and class origin was not necessarily the main focus of their analysis.⁶

C. Structure

This paper is structured as follows. In Section 2, we discuss the framework of study, working hypothesis, data coverage, and possible sources of bias. In Section 3, we examine the father-son correlation of education between cohorts of male heads of household and their fathers. Then, in Section 4, we investigate the determinants of educational attainment of the current younger generation by employing control variables at individual, family, and regional levels, as well as parental education and family class origin. Section 5 presents our conclusions.

II. Framework of Research

A. Family Class Origin

As mentioned above, we employ family class origin, the political label attached to every family throughout the Maoist era, as the focal variable throughout the study. Family class

origin was designated during the period of land reform (late 1940s to early 1950s) based on previous economic status, and remained unchanged until the end of the 1970s.

Figure 2 illustrates a conceptual framework of family class origin in the sociopolitical and economic hierarchy in rural China. The upper part of the figure addresses the sociopolitical hierarchy, and the lower half describes the economic hierarchy. The economic and sociopolitical hierarchy in the pre-1949 era can be illustrated as a pyramid. Families labeled as landlord/rich peasant, a minority, were at the top rung of both economic and sociopolitical hierarchies. Middle peasant families were at the middle level, and poor and lower-middle peasant families, the majority, were at the bottom of the structure (see the left-hand part of the figure). During land reform, land and other property of landlord/rich peasant families was forfeited and redistributed to families classified as poor and lower-middle peasant.

Landlord/rich peasant families were allowed to keep minimum means of production after land reform. Properties of families designated as middle peasant were basically protected (see the trapezoid at the lower-middle part of the figure).⁷ After the thorough collectivization of agriculture in the late 1950s, all families had become economically homogeneous People's Commune members within a unit of collective agricultural production (the production team and the production brigade), although, as described below, families of landlord/rich peasant origin had an economic disadvantage because of class-based discrimination in the distribution of income (Zhang 1998; Sato 2003).⁸ After the early 1980s, the peasant family had been revived as an economic entity by decollectivization. Family characteristics had again become relevant to a family's socioeconomic conditions (see the right-hand part of the figure).

With regard to the sociopolitical hierarchy, family class origin had become a critical determinant of sociopolitical status after land reform and throughout the Maoist era (Cao et al. 1995; Chan et al. 1984; Huang 1995; Unger 1982; Watson 1984; Zhang 1998). Family class origin was recorded in the household registration, and as an implied political label it

influenced the rural population's education, employment, party membership, and all other social and economic opportunities. The pyramid-shaped sociopolitical hierarchy in the pre-1949 era became an inverse pyramid after the 1950s. Families labeled as landlord/rich peasant dropped to the bottom rung of the sociopolitical hierarchy, middle peasant families remained at the mid-level, and poor and lower-middle peasant families were at the top of the structure (see the upper right-hand part of the figure).⁹ It was not until 1979 that the Communist Party announced the abolition of the system as a measure of political accreditation. In every political campaign in the Maoist era, especially 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 an intense 'class struggle'.¹⁰

[Insert Figure 2]

The 2002 CHIP survey provides information on the class origin of the heads of the household and their spouses' parents. Based on this information, we adopted the following classification of family class origin.

(1) Landlord/rich peasant (*dizhu/funong*) family. This means a family where either parent of the head of the household is of landlord/rich peasant origin. This class category represents the former 'exploitative' class and was regarded as a 'bad class' throughout the Maoist era.

(2) Poor and lower-middle peasant (*pinxiazhongnong*) family. This means that both parents of the head of the household are of poor or lower-middle peasant origin. They belong to the 'good (revolutionary) class'.

(3) Middle peasant (*zhongnong*) family. Both parents of the head of household are of middle peasant origin, or one of the parents is of middle peasant origin and the other is of a poor or lower-middle peasant origin. Rich middle peasant (*fuyu zhongnong*) and some other

minor middle-class categories such as small landholders (*xiao tudi chuzuzhe*) and merchants (*shangren*) are classified as middle peasant. They belong to the ‘middle’ class; that is, they are allies of the revolutionary class.

Table 1 classifies the family class origin of our sample households by agricultural macroregions.¹¹ In the overall sample, landlord/rich, middle, and poor and lower-middle peasants comprise 6.4, 19.8, and 73.8 percent, respectively. Although the ratio of landlord/rich peasant is higher in the northeastern and southwestern regions, there are no large regional differences in the structure of family class origin among agricultural macroregions.

A possible criticism of using family class origin is that it is a crude indicator of family status because the socioeconomic characteristics of families designated as a certain class during land reform vary considerably across regions. Our rationale for using family class origin is as follows. First, because family class origin became a fixed political label after the 1950s, its sociopolitical meaning is basically common to all areas. Second, although the economic substance of a certain class before land reform varied between regions, it is reasonable to assume that class status represents relative socioeconomic status within each of the regional units where land reform was implemented. If so, we can utilize an appropriate regional dummy variable. County (*xian*) is the appropriate regional unit because it was the basic unit for applying the land reform policy.¹²

[Insert Table 1]

B. Historical Cohorts

For the purpose of our study, it was important to conduct the investigation according to birth cohorts. When classifying birth cohorts, the unequal accessibility of education to people with different class origins in different historical periods should be considered.

Figure 3 shows average years of education for all current male household members grouped into five-year birth cohorts.¹³ From this figure, we can confirm that the educational level of peasants has been increasing steadily since 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 educational 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 educational level of landlord/rich peasant family members became lower than their middle peasant and poor/lower-middle peasant counterparts. It is clearly suggested that landlord/rich peasant family members were subjected to social discrimination. It is not until the 1960–1964 birth cohort that the educational level of landlord/rich peasant family members caught up with the other classes.

[Insert Figure 3]

Here we focus on the two transitional birth cohorts in Figure 3: the 1945–1949 and 1960–1964 cohorts. In the 1945–1949 cohort, we found that the proportion of male members who could not proceed to junior high school level education (those who had less than six years of education) was 65 percent in landlord/rich peasant families and 53 percent in poor and lower-middle peasant families. In the 1960–1964 cohort, we found a type of polarization in the educational attainment of landlord/rich peasant family members. Specifically, the proportion of male members who had 10 years or more of education was 23 percent in landlord/rich peasant families and 20 percent in poor and lower-middle peasant families, while the proportion of those who had less than six years' education was 21 percent in landlord/rich peasant families and 17 percent in poor and lower-middle peasant families. These findings suggest that, for the 1945–1949 cohort, class-based disparity in educational levels could be

seen in the transition from primary school level to junior high school level education. This was the first transitional cohort when the overall average length of education was around six years. In the second transitional cohort, the 1960–1964 cohort, the overall average length of education increased to approximately eight years, and continuing education beyond junior high school level became the important crossroads.

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

(1) Pre-Maoist cohort. This cohort consists of those who were born in or before 1944 (age at 2002: 58–88 years). They had reached the age of 12 years before 1957, the year when the collectivization of agriculture had generally been completed and when large political campaigns, the Rural Socialism Education Movement (*nongcun shehuizhuyi jiaoyu yundong*) and the Anti-Rightist Movement (*fan youpai yundong*), had been launched.¹⁴

(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, 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 when it had almost finished. This cohort is a transitional cohort between the Maoist era and 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 era to the reform era, which is illustrated by the third plenum of the 11th Central Committee of the

Communist Party of China (December 1978) and the official announcement of the abolition of family class origin as the measure of political accreditation (January 1979).¹⁵

[Insert Table 2]

C. Subjects and Outcome Measures

Taking the common explanations for intergenerational transmission of education and Szelenyi's account into consideration, Table 3 illustrates the framework of the empirical study in this paper. We included three generations (Panel A of Table 3). The first (grandfather's) generation is the generation of fathers of current heads of household. The second (father's) generation is the generation of current heads of household. The third (children's) generation comprises resident and nonresident children aged 16–18.

The outcome measures are as follows (Panel B of Table 3). First, for the educational level of the second generation, we employed years of education completed by heads of households. To focus on father–son correlation of education, we concentrated on male heads of household. Thus, our working data consisted of 8821 observations (Note that male heads of household who were continuing education in 2002 are not included). Second, regarding the third generation, we introduced a dummy variable for whether children aged 16–18 had already achieved or were achieving 10 years or more of schooling; that is, whether they continued schooling beyond junior high school level. The number of observations for this estimation was 2639.

[Insert Table 3]

We examined the following focal determinants of intergenerational correlation in education and their operational measurements. (1) Previous generation's educational level: Considering that the school system in rural areas has changed frequently and that dropping

out of school is very common, we use years of education completed, not the school credentials. (2) Ability to invest in offspring's education: Unfortunately, an operational measure of households' ability to invest in offspring's education during the Maoist era is not available. In the following discussion, we instead utilize some data from case studies. Regarding the postreform era, in Section 4, when we investigate the determinants of the educational level of the current younger generation, we employ per-capita family wealth as a proxy for a family's economic ability. (3) Class-based social discrimination and (4) Family culture: As described above, we utilize family class origin to examine these two factors.

D. Data Coverage and Possible Bias

Here we discuss the coverage of our data. The sampling framework of the official household survey by the NBS is based on the *hukou* (household registration) system. Because the rural samples of the 2002 CHIP survey are subsamples of NBS's official household survey, our working data set is representative of the population that has rural *hukou* status, but it does not include those who had changed their *hukou* from rural to urban status (*nongzhuanfei*).¹⁶ If there was a considerable volume of permanent rural–urban migration from changes in *hukou* status, and if we found a large difference in the probability of obtaining urban *hukou* status among people of different class origins, these could be a possible source of bias for our empirical analysis. However, we argue that the bias would not be serious for the following reasons.

First, the volume of permanent rural–urban migration from changes in *hukou* status is rather low. Based on the urban household data of the 2002 CHIP survey, we estimated that the ratio of rural–urban migration with changing *hukou* status was approximately eight percent of the total population in 2002.¹⁷ This very low volume reflects the long-lasting strict restriction on rural–urban migration since the establishment of the *hukou* system at the end of the 1950s.

Although the restriction of migration based on the *hukou* system has been relaxed in recent years, the massive inflow of rural populations into urban areas is still basically individual-based migration that does not affect *hukou* status. Our family-based rural samples captured such temporary migrants.¹⁸

Second, although we found weak evidence of selective migration based on family class origin, the magnitude and direction of the bias do not affect our discussions. Based on the 2002 CHIP urban survey, the percentage of landlord/rich peasant family members of the total number of permanent migrants is 6.3 percent. This is almost the same as the percentage of landlord/rich peasant families in our working data set (see Table 1). When we calculated the proportion of landlord/rich peasant family members in different historical periods, we obtained the following figures: 5.2 percent for those who migrated during the period 1949–1979, 2.8 percent for 1966–1975, during the Cultural Revolution, and 7.6 percent for those who migrated after the 1980s. Although it is suggested that persons of ‘bad class origin’ were less likely to migrate during the Great Cultural Revolution, we did not find strong evidence of class-origin-based selective migration for the entire Maoist era. This could be explained by the fact that in the Maoist era, in addition to the criteria for changing *hukou* status (such as becoming party/government cadres, entering college, and joining the army), there were also nonselective channels such as expropriation of the village’s cultivated land by the state.

III. Intergenerational Correlation of Education by Historical Cohorts

A. Class Origin and Father–Son Correlation in Education

In this section, we examine the father–son correlation of education between male heads of household (the second generation) and their fathers (the first generation) by historical cohorts, using OLS regression.¹⁹

The outcome measure was years of education completed by male heads of households. The focal independent variables were: (a) dummy variables for family class origin (the omitted category was poor and lower-middle peasant); and (b) years of education completed by fathers of male heads of household. To control for different sociopolitical environments in different historical periods and for the overall upward trend in average level of education (see Figure 3), we introduced (c) dummy variables for birth cohorts of male heads of household (the pre-Maoist cohort was omitted in the estimations as the reference). We also incorporated (d) interaction terms of family class origin and birth cohorts of male heads of household to illustrate how the effects of family class origin on offspring's education vary by historical periods. In addition, a county dummy is included to allow for regional disparities surrounding rural education and for abovementioned different conditions in the classification of class status during the land reform.

[Insert Table 4]

Table 4 reports the estimation results. Equation 1 in the table contains no interaction terms. Equation 2 incorporates interaction terms of family class origin and birth cohorts. The following points can be made from the results.

First, the main effect of landlord/rich peasant on offspring's education changes considerably when interaction terms with birth cohorts are included: from negative and insignificant (equation 1) to positive and highly significant (equation 2). As reported in equation 2, interaction effects between landlord/rich peasant and birth cohorts are negative and statistically significant for the mid- and late-Maoist cohorts, whereas they become insignificant for the postreform cohort.²⁰ Combining these interaction effects with the main effect, it is demonstrated that the father-son education persistence in landlord/rich peasant families was interrupted in the mid-Maoist cohort and rebounded in the postreform cohort.

Second, with regard to middle, poor, and lower-middle peasants, there was a convergence of education after 1949. Equation 2 shows that the significant positive main effect of middle peasant status and the significant negative interaction effects with birth cohorts cancel each other out. This tendency reflects the fact that father–son education persistence of middle peasant families in the pre-Maoist era was diminished by the collectivization and the equal spread of public education across non-‘bad’ classes during the Maoist era.

Third, we have no evidence that the effect of father’s education varies by family class origin. Although not reported in Table 4, we have added the interaction terms of family class origin and father’s education to see whether the slope of father’s education is steeper for those who are landlord/rich peasant origin than for their poor and lower-middle peasant origin counterparts. We have found no statistically significant result suggesting that the slope of father’s education is different according to family class origin.

B. Class-Based Discrimination

The large negative interaction effect of the landlord/rich peasant origin in the mid-Maoist cohort clearly suggests intense class-based discrimination in the Maoist era. We hypothesize direct and indirect traits through which family class origin affects offspring’s education. Unfortunately, because of limited data, we cannot directly examine the hypothesis using the 2002 CHIP survey. Instead, here we introduce some evidence from case studies, including our own, that utilize historical materials concerning a village in Northern Zhejiang (Cao et al. 1995, Sato 2003; Zhang 1998).

Regarding the direct influence of family class origin on offspring’s education, first, access to educational opportunities was strictly limited to children of landlord/rich peasant families, or even to children of rich middle peasant families. Second, it may fairly be presumed that children of ‘bad class origin’ were more likely to drop out of school due to unequal treatment

in school. Concerning inequality in educational opportunities, a typical case in a Northern Zhejiang village is as follows. In 1958, a boy obtained admission to a junior high school. However, the production team where his family lived did not allow him to continue schooling because his family was designated as a rich middle peasant. In 1969, the ‘Poor and Middle Peasant Governing Committee’ was established at the People’s Commune level and until 1976 had the authority to decide who should go to junior high and upper grade schools (Cao et al. 1995, 392–407; Zhang 1998, 126, 388–9).

The indirect influence of class origin on offspring’s education is that the incomes of ‘bad class’ families tended to be lower than their ‘good class’ counterparts, and their lower income negatively affected offspring’s education. Although there are no systematic data on income inequality by class origin during the Maoist era, our case study on within-village income inequality under the People’s Commune system suggests that landlord/rich peasant families were often discriminated against in the distribution of income. Based on the account books and the household registration records of a production team in Northern Zhejiang, we conducted family reconstitution of the production team and compared the relative income of a former landlord/rich peasant family named Chen with other families in the team. The per-capita collectively distributed income (*jiti fenpei*, sum of grain and other incomes in cash or in kind) of the Chen family relative to the production team average was calculated as 62 in 1962, 64 in 1965, 97 in 1970, 105 in 1972, and 112 in 1974 (the production team average was 100). The relatively low income of the Chen family in the 1960s was due to the relatively small number of work points (*gongfen*) earned per laborer, as well as relatively high dependency ratio.²¹ For example, in 1962, the Chen family is supposed to have two labor forces (one male and one female, both approximately 45 years old) and each laborer received an estimated 1136 points. Another poor peasant origin family with similar labor force structure (one male around the age of 45 and one female around 30) is estimated to have earned 1692 work points

per laborer in 1962. This rather large difference in work points per laborer between the two families implies that, in addition to a difference in working abilities, there existed class-based discrimination in the allocation of work and in the evaluation of the fixed number of work points per day (*difen*) for each laborer, although we cannot decompose the sources of the difference. It is interesting that the relative income of the Chen family began to increase in the early 1970s. Our family reconstitution suggests that this upward trend was caused by the increase in the number of labor forces and the fact that a young male family member obtained a job in the commune's telephone station. It is noteworthy that a landlord family member could obtain a high status job. This implies that class-based discrimination had already been relaxed before the end of the Cultural Revolution in our survey site. This provides justification for the introduction of the late-Maoist cohort as a transitional cohort from the Maoist era to the postreform era.

Summing up, it is safe to conclude that both the direct and the indirect class-based traits of educational attainment were found in the Maoist era, although the data do not allow us to decompose their relative magnitude.

C. Social Environment and Cultural Rebound

Our hypothetical explanation of the rebound in educational level among family members of landlord/rich peasant origin in the postreform cohort is that it was caused by a psychological or cultural reaction against class-based discrimination. That is, fathers of this generation tended to have stronger incentives to encourage their sons' education after the political label of class origin was abolished at the end of the 1970s.

If our hypothetical explanation applies to this case, then it is anticipated that the rebound would be stronger where the discrimination was more severe. Unfortunately, we have no direct information on the degree of discrimination during the Maoist era. Here we try to

measure the degree of discrimination by the density of kinship relationships surrounding the family. The previous village studies vividly illustrated that, in the Maoist era, peasants' attitudes toward their 'bad class' relatives oscillated between emotional kinship and the principle of class struggle.²² Based on previous literature, we propose a working hypothesis that class-based discrimination could be mitigated where there are dense kinship relationships across families of different class origins.

As a proxy of the density of kinship relationship within the community, we utilized the surname structure of villages. Our household questionnaire contains information on whether the sample families belong to the most commonly occurring surname (*daxing*) in the villages where they live.²³ The 2002 CHIP survey also includes village questionnaires. Based on the village questionnaires, we could divide villages where sample households live into multisurname villages and nonmultisurname villages. Following previous literature such as Perkins (2003), we define nonmultisurname villages as villages where families with the most commonly occurring surname comprise more than half of the total number of families. Other villages are classified as multisurname villages. According to this information, we could classified sample families into two groups: (a) families with the most commonly occurring surname in the nonmultisurname villages (hereinafter referred to as the big surname families); (b) other families, that is, families living in the multisurname villages and families with minor surnames living in the nonmultisurname villages (hereinafter referred to as the small surname families). Of the observations in Table 4, approximately 22 percent belong to the big surname families. It can be assumed that the big surname families have a higher density of within-village kinship relations than the small surname families.

As a rationale for this approach, we have investigated the determinants of the frequency of mutual-labor-exchange (*banggong*) within the village, a most common mutual help activity in rural area. The dependent variable is the log of working days the families spent on mutual-

labor-exchange in 2002 (*Ln banggong*).²⁴ The focal independent variable is dummy variable for the big surname families (*Big surname*). Other control variables are number of working-age family members (*Wrkpop*), per-capita contracted farm land (in mu, *Land*), per-capita amount of family wealth (in thousand yuan, *Wealth*) (see the next section for the definition of family wealth), age and its squared term for heads of household (*Age*, Age^2), and county dummies. The result of OLS regression is as follows:

$$\begin{aligned} Ln\ banggong = & 0.750^{***} + 0.136\ Big\ surname^{***} + 0.104\ Wrkpop^{***} + 0.058\ Land^{***} \\ & - 0.008\ Wealth^{***} + 0.048\ Age^{***} - 0.0006\ Age^2^{***} \quad R^2: 0.279, N = 9189. \end{aligned}$$

(*** denotes statistically significant at the 1% level. County dummies are not reported.)

This result implies that the level of within-village mutual help activity is higher among the big surname families. Although this result reflects the current situation, it would be reasonable to assume that these kinds of social factors tend to be stable over time.

According to this classification, Table 5 summarizes the reestimation of the influence of landlord/rich peasant background on educational levels of male heads of households. In this case, landlord/rich peasants were divided into landlord/rich peasant families belonging to (a) the big surname families and (b) the small surname families. Other independent variables were the same as in Table 4, and the mid-Maoist cohort and the postreform cohort were compared.²⁵ From this table, first, we can confirm that there was a drop and rebound in the educational level of all landlord/rich peasant families in the mid-Maoist and the postreform cohorts (equations 3 and 4). Second, with reference to the landlord/rich peasant families belonging to the small surname families, we found a significant negative coefficient for landlord/rich peasant status in the mid-Maoist cohort (equation 1). The relevant coefficient became positive and significant in the postreform cohort, implying a sharp rebound from the drop in the previous cohort (equation 2). Third, regarding the landlord/rich peasant families belonging to the big surname families, in contrast, we found a negative but not statistically

significant coefficient in the mid-Maoist cohort (equation 1). The relevant coefficient turned to be positive, but still insignificant in the postreform cohort (equation 2).

These findings imply that the degree of drop and rebound in the educational level of the landlord/rich peasant families was negatively associated with the density of kinship relations surrounding the families. On the assumption that kinship relations affected the severity of the class struggle, we conclude that there was a proportional rebound of educational attainment of landlord/rich peasant family members by the degree of class-based discrimination during the Maoist era.

[Insert Table 5]

IV. Determinants of Educational Attainment of the Current Younger Generation

A. Framework of Estimation

In this section, to elaborate further on the findings in the previous section, we proceeded to investigate parent–children correlations of education between the second generation (heads of household and their spouses) and the third generation. The third generation was defined as children aged 16–18 in 2002 (the number of observations is 2639). Because we are interested in parent–children transmission of education, wives of sons (daughters-in-law) living at home were not included.

The framework of analysis is summarized in Table 6. The outcome measure is the dummy variable for children’s educational attainment that indicates whether they continued to attend senior high school after completing junior high school (1 if children aged 16–18 are full-time students or had already completed 10 years or more of education, otherwise 0). This threshold is set according to the current school system (nine-year compulsory education) and the actual situation of rural education illustrated in Figure 3. We employed probit models to analyze our data. Because a proportion of the cases are siblings belonging to the same family, we

conducted estimation by clustering observations at the household level to deal with heteroskedasticity of grouped data.

An advantage here is that we could employ several control variables for family characteristics, which could not be utilized in the previous section. We focused on the following variables that indicate family background: (a) family class origin; (b) parents' completed years of schooling; (c) political status (Communist Party membership of head of household); (d) economic status (per-capita family wealth in 2002); and (e) father's birth cohort.

Regarding the intergenerational spillover of education, here the effects of father and mother can be seen separately. Communist Party membership of head of household was employed as an indicator of family's sociopolitical status in the community, which might affect parents' attitudes to children's education on the one hand, and as a proxy of parents' human capital that complements educational level on the other. The expected sign of the coefficients for parents' education and party membership are positive.

While family's economic status is a basic explanatory variable in studying intergenerational transmission of education, it is difficult to measure it properly based on cross-sectional data. Because income earned in one year is misleading because of year-to-year fluctuations, we employed current per-capita family wealth as a proxy for the long-term stream of family income. Family wealth is defined as the per-capita amount of financial assets, durable goods, housing assets, and fixed assets for production at the end of 2002.

Ages of fathers with children aged 16–18 are distributed from the mid 30s to the early 60s; these men basically belong to the mid- and late-Maoist cohorts. We control for father's age by classifying it into three birth cohorts: first, fathers born before 1954 (the former half of the mid-Maoist cohort and the pre-Maoist cohort); second, fathers born in 1954–1959 (the latter half of the mid-Maoist cohort); third, fathers born in 1960 and later (the postreform cohort).

We hypothesize that children whose fathers belong to the first cohort tend to have a higher probability of continuing education beyond junior high school level for the following reasons. The first is a cohort effect. Fathers belonging to the first cohort (born before 1954) can be regarded as the Cultural Revolution cohort because they experienced the turmoil in the education system caused by the Cultural Revolution when they were in their adolescence or early adulthood. The literature on family sociology argues that external shocks during adolescence and early adulthood are likely to have long-term influences on one's values and social attitudes (Bengtson et al. 2002). Following the relevant literature, we assume that fathers belonging to this birth cohort tend to have a stronger motivation for offspring's education. The second is an age effect. Since fathers belonging to the first cohort had children at a later age, when they had reached mature adulthood, it is assumed that they tend to care more about children's education.

With reference to children's individual characteristics, we controlled for (f) gender (dummy for male children) and (g) age (17–18 dummies). Based on previous literature (see, for example, Song, Appleton, and Knight 2006) and our general knowledge of rural China, we assumed that boys would be more likely to achieve higher educational levels than girls. Coefficients for age dummies were assumed to be negative because the probability of dropping out of school becomes higher with age.

Considering large regional disparity in economic and educational conditions, we introduced a measure of the level of regional economic development: (h) the sectoral structure of GDP at the county level (logit-transformed proportion of nonagricultural GDP to total GDP at the county level in 2001). This is a measure of the level of socioeconomic opportunities that induce demand for education, and, at the same time, a proxy of the financial ability of local government to invest in rural education. We also anticipate that peer effect among parents in sending children to school is stronger in developed regions.

[Insert Table 6]

Before conducting the estimation, two possible sources of bias in our working data should be considered: first, censoring of children who have left home to receive higher educational attainment; second, selection bias caused by excluding children (mostly females) who have married and left home at younger ages. If the data are right-censored by these factors, as discussed in previous literature such as Holmes (2003), we should employ censored probit instead of ordinary probit. Regarding the former point, because our data include not only ‘resident family members (*changzhu renkou*)’, but also ‘nonresident family members (*fei changzhu renkou*)’, that is, family members who basically live away from home but are not yet socially and economically independent from their parents, it is safe to assume that the problem of right-censored data is minimal. Concerning the latter point, if the age of independence from parents relates to children’s ability or motivation for education, there may be sample selection bias in estimating educational level only for children who have not yet left home to start their own families. Based on our working data, we checked this point for each gender and concluded that there was no serious selection bias for either males or females.²⁶ Thus it will be safe to conduct ordinary probit estimation.

B. Estimation Results

The outcomes of probit estimation are described in Table 7. The following points can be made from the outcomes.²⁷

[Insert Table 7]

First, when all other factors are controlled for, family class origin still has statistically significant effects on children’s educational levels (equation 1). Children of landlord/rich peasant families are more likely to continue schooling beyond junior high school level than

their poor and lower-middle peasant counterparts. It is rather surprising that the marginal effect of landlord/rich peasant origin (10.2 percent) is even larger than that of heads of household's party membership (8.1 percent). It should be noted that middle peasant origin also shows a positive and statistically significant effect on children's education. It is interesting to consider whether the effect of family class origin varies according to the sectoral structure of regional GDP. To investigate, equation 2 adds interaction terms for family class origin and the share of nonagricultural GDP. Other controls employed are the same as in equation 1. We find that the interaction terms are both insignificant, implying that the positive effects of family class origin are rather robust in the sense that they are not diminished by the level of regional economic development.

Second, we see positive and significant effects of parents' education.²⁸ The marginal effects of parents' education imply that a marginal increase from the average (7.5 years) in father's schooling brings a 1.9 percent higher probability of the children achieving higher educational attainment. The same figure for mothers' schooling (5.8 years on average) is 1.7 percent.

Third, Communist Party membership of heads of household was proved to positively and significantly influence children's education. It is shown that party membership is associated with an 8.1 percent increase in the probability of higher educational attainment when all other independent variables are fixed at their average.

Fourth, it is shown that family wealth has a positive and statistically significant effect on children's educational attainment, as was expected. A marginal increase in per-capita family wealth from the average (9213 yuan) is associated with a 0.7 percent increase in the probability of achieving higher educational attainment. We can confirm that the wealth-education correlation, the common trait of intergenerational transmission of education, has certainly been revived in the postreform era.

Fifth, as expected, we found that children whose fathers were born before 1954 are more likely to continue education beyond junior high school.²⁹

Sixth, from the positive and significant coefficient for male children, we found a clear gender gap in education. This is consistent with previous literature and with our general knowledge of rural China. The marginal effect for gender illustrates that boys have an 8.7 percent higher probability of higher educational attainment than girls.

Seventh, the positive and statistically significant coefficient for the sectoral share of county GDP implies that the level of regional economic development has a considerable effect on the educational levels of rural youth. This finding, along with the significant positive effect of family wealth, suggests that both intra- and interregional disparities in education will increase in the future unless an adequate public policy is adopted.

C. Class-Specific Family Culture

It is noteworthy that middle peasant origin, as well as landlord/rich peasant origin, positively correlates with children's education. This finding implies that, besides the cultural rebound against class-based discrimination, another family-specific factor should be incorporated in our discussion. Our explanation is that the relatively rich family culture of the former landlord/rich peasant and middle peasant families inherited from the pre-Maoist era has again begun to play a role after the revival of the family as the basic unit of economic activity in the early 1980s. Although the radical institutional change after 1949 thoroughly destroyed the physical capital stocks of formerly wealthy families, it may safely be assumed that invisible family cultural capital accumulated before 1949 may have been preserved throughout the Maoist era. Offspring aged 16–18 entered middle school age after the late 1990s when the marketization of the rural economy had accelerated and the rural population had begun to face new opportunities and risks, such as the expansion of rural–urban labor migration, a wave of

privatization of township and village enterprises, and the challenge of structural adjustment of agricultural production. Previous literature shows that, along with marketization, education has become increasingly important to obtain lucrative job opportunities in rural areas, although the trend of increasing returns to education is not as clear cut as in urban areas (see Zhao 1997; Wei et al. 1999; Zhang et al. 2002; Yue et al. 2007).³⁰ Expansion of senior high school level education in rural areas was also observed in the 1990s. It seems appropriate to assume that families with relatively rich family cultures are more responsive to such changes in the socioeconomic environment and are likely to have stronger motivation to educate their children.

As another piece of supporting evidence for this finding, Table 8 reports the association of parents' family class origin and their expectations for children aged 9–12 (children who are currently in the higher grades of primary school or the lowest grade in junior high school).³¹ This table reveals that the proportion of parents who wish their sons aged 9–12 to attain senior high school level or above is higher in parents of landlord/rich peasant and middle peasant origins. A similar association can be found for daughters, although the level of statistical significance is lower.

[Insert Table 8]

V. Conclusion

Thus far, we have examined the intergenerational correlation of education in rural China, focusing on the influence of family class origin. Regarding the educational level of male heads of household with landlord/rich peasant background, we found a reduction caused by class-based discrimination in the Maoist era and a rebound in the postreform era. We also found that the current younger generation (aged 16–18) who are of landlord/rich peasant and middle peasant origin are more likely to achieve higher educational attainment. Family class

origin is still relevant for the educational achievement of the current younger generation. In summary, we conclude that a class-specific, education-oriented family culture has been shaped as a mixture of, first, family cultural capital inherited from the pre-Maoist era and surfacing again in the postreform era, and, second, the intergenerational cultural rebound against class-based discrimination.

Our findings in this paper have the following research implications for studying China: comparative economic transition, and socioeconomic analysis of social discrimination.

First, regarding the study of China, our findings suggest that there should be greater emphasis on the continuity and robustness of the rural family as a cultural institution. We share the interest of recent historical studies in long-term trends in social stratification in rural China based on microdata, including those of Campbell and Lee (2003; 2006). Campbell and Lee, using a unique data set compiled from household registrations in rural Liaoning from the mid 18th century to the end of the Qing dynasty, have found long-term continuity in the influences of family and kin networks on social mobility.

Second, with reference to comparative economic transition, our study implies that, as far as intergenerational transmission of education is concerned, the major transmission path in rural China is different from that in rural Hungary, although there is a common outcome. That is, those of upper class origin are more likely to gain an advantage in education after the beginning of economic transition. The difference is in whether they could utilize the public education system before the beginning of transition. In rural Hungary, wealthy families could transmit their family human capital by utilizing the education system under the socialist regime (Szelényi's 'interrupted embourgeoisement' account).³² This is because the collectivization of agriculture in Hungary was relatively moderate in policy and of shorter duration than in rural China.³³ Moreover, rural Hungary did not experience repeated political campaigns that emphasized 'class struggle'. In rural China, there were very few chances in

the public education system for families of landlord/rich peasant origin to transmit the previous generation's human capital during the Maoist era. However, family cultural capital could not be destroyed and, in response to class-based discrimination, they developed an education-oriented family culture that began to play a role after the collapse of the rural class system. It would be interesting to extend our study to other transition economies.

Third, in a more general setting, our findings share implications with those of recent literature on economic analysis of social discrimination. For example, Fang and Norman (2006) compared the labor market outcomes of different ethnic groups in Malaysia and found that ethnic Chinese, a group that has been discriminated against in the labor market, are economically more successful. They argue that the cultural capital transmitted within families, which is very difficult to destroy by government intervention, plays the key role. Our findings can be understood in a similar way. However, it is not necessarily natural that discrimination causes a rebound. As is emphasized in A. K. Sen's criticism of utility as a measure of well-being, a common reaction of oppressed people against 'long-standing deprivation' is resignation, or fatalism rather than rebound (Sen 1992, 55). Why, then, did rebound rather than resignation become the major form of reaction against class-based discrimination in rural China? 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 have overwhelmed 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 origin influence the current generation's income and wealth. This task will be undertaken in our forthcoming paper.

Notes

- ¹ The stratified sampling of the NBS rural household survey followed two steps. First, sample administrative villages were directly selected in each province according to income level, and second, sample households (generally 10) were chosen from each sample village. The total sample size of the NBS rural household survey is approximately 68,190 households distributed across 6820 villages. For details of the sampling framework and sampling method of the CHIP 2002 survey, see Gustafsson, Li, and Sicular (2007). The CHIP survey was administered in 1988 and 1995 using a similar sampling framework and questionnaires. However, these rounds of the survey did not include information on family class origin.
- ² Although some of the recent studies such as Black (2005) doubt the intergenerational spillover of education, we cannot consider the issue further in this paper.
- ³ For the notion of family and family culture, we refer to Bengtson et al. (2002), Bowles et al. (2005), Coleman (1988), Erikson and Goldthorpe (2002), Grawe and Mulligan (2002), Mincer and Solomon (1974), and Solon (1992).
- 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 Although family planning policy is an important issue in studying the intergenerational transmission of education, because the impact of the policy would not differ with family class origin we did not elaborate the issue in the present paper. Ting (2004) 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, and reported that no difference was found in lifetime reproductive strategies between families of different socioeconomic statuses in rural areas, while there was a difference between white-collar families and blue-collar families in urban area. Drawing on Ting's argument and taking into account the fact that the difference in the number of children between families is relatively small in rural China (compared with other developing countries) because of a family planning policy, in this paper we do not consider the quantity–quality trade-off.
- ⁶ We will elaborate on their discussions when we examine the intergenerational correlation of education in urban China in our future research.
- ⁷ It should be noted that middle peasant families were also attacked in some areas where radicalism dominated the reform process. See Crook (1997/1967), Hinton (2003/1959),

Putterman (1993), and Selden (1988) for the economic impact of the Land Reform and collectivization on peasant households.

- ⁸ Note that intercommune and interregional inequality in peasant income remained steady or even increased under the People's Commune system (Selden 1988).
- ⁹ See the previous village studies such as Cao et al. (1995), Chan et al. (1984), and Zhang (1998) to see how the notion of 'bloodline (*chushen xuetong*)', which implies children with 'bad' family background have inherited taint, affected social life of peasants in the Maoist era. Take the example of a village in Zhejiang, in which seven of nine bachelors in the village in the early 1980s were offspring of landlord/rich peasants (Cao et al. 1995, 205).
- ¹⁰ The opposite of the 'five blacks' were the 'five reds (*hong wulei*)', that is, poor peasants, lower-middle peasants, workers, revolutionary soldiers, and revolutionary cadres; these were regarded as the base of the socialist regime.
- ¹¹ For classification of agricultural macroregions, see Guojia Ditu Bianji Weiyuanhui (1989).
- ¹² 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).
- ¹³ Note that Figure 3 includes only current members of the household. Fathers of heads of household who do not live with current household members are not included.
- ¹⁴ The Advanced Agricultural Production Cooperatives (*gaoji nongyeshengchan hezuoshe*) covered the entire rural area in 1957. In 1958, the Advanced Agricultural Production Cooperatives had been reorganized into People's Communes (*renmin gongeshe*).
- ¹⁵ Approximately 86 percent of male heads of household belonging to the postreform cohort are aged 30 years old or over. Approximately 76 percent of their fathers belong to the pre-Maoist era, and the remaining 24 percent to the mid-Maoist cohort.
- ¹⁶ Regarding the institutional background and economic role of the *hukou* system, see Cheng and Selden (1994), Liu (2005), Wang (2004), and Whalley and Zhang (2004).
- ¹⁷ Based on the *hukou* status of the heads of household in the 2002 CHIP urban household survey, which is a nationally representative sample of urban households, we estimate that approximately 27 percent of heads of households originally had rural *hukou* status. By multiplying this figure by the proportion of urban *hukou* population (28 percent in 2002), we obtain 7.5 percent (Guojia Tongjiju Renkou he Shehui Keji Tongjisi 2003, 209).
- ¹⁸ The 2002 CHIP survey also contains a sample of temporary rural-urban migrants, which is randomly selected based on the temporary migration registration (*zanzhu renkou dengji*) in

urban areas. The cities covered are the same as those in the urban household survey. We have checked the temporary migrant samples and confirmed that there is no significant difference in the structure of family class origin between rural and temporary migrant samples.

- ¹⁹ We are aware that many other factors (including family socioeconomic status in different periods and inherited ability of children) have not been considered and that the problem of unobservability (endogeneity) exists. However, it is unfortunately difficult to find good instruments to deal with the problem in the available data.
- ²⁰ We have confirmed that class origins, birth cohorts, and their interaction terms are jointly significant at the 1 percent level (F statistic 5.36, p -value 0.0000).
- ²¹ Note that the distribution of food grain (*kouliang*) was rather egalitarian as expected. Per-capita food grain for the Chen family relative to the production team average was 108 in 1962, 99 in 1965, 98 in 1970, and 110 in 1974. For details on the data sources and socioeconomic background of the study site, see Zhang (1998) and Sato (2003).
- ²² See for example Chen et al. (1995, 45–7, 521–7) and Zhang (1998, 434–7) for the case in Northern Zhejiang and Chan et al. (1984) for the case in Southern Guangdong.
- ²³ Same surname here means families with the same surname who regard themselves as descendants of common male ancestors.
- ²⁴ The mean and standard deviation of working days for mutual labor exchange is 17.67, 1.359.
- ²⁵ This is based on the fact that no difference in the average years of education between multisurname and nonmultisurname villages was found (for the pre-Maoist cohort, 6.0 years) and the assumption that the responsiveness of families to external shocks is distributed randomly.
- ²⁶ Based on the samples of the 2002 CHIP survey, we have found that the ratio of males who are heads of household to the total number of males aged 16–18 is negligible and that the ratio of married females to the total number of females aged 16–18 is only 0.96 percent.
- ²⁷ We have also conducted OLS estimation using children's years of education as the dependent variables. Although we have not reported the results in the text because of the space limitations, the estimation results are consistent with the results of probit estimation.
- ²⁸ On the assumption that grandfather's education might have an independent influence on grandchildren's education in the context of rural China, we have conducted an estimation employing grandfather's education. Contrary to our expectation, the coefficient for

grandfather's years of education is positive, but not statistically significant. This might be because we could not control the actual situation of within-family cultural interaction between grandfather and grandchildren (for example, whether or not grandfathers live with grandchildren when grandchildren are in their childhood and adolescence, and if they lived together, for how long).

²⁹ For a general discussion on the significance of cohort-specific factors in the Maoist era, see Davis-Friedman (1985).

³⁰ Regarding the increasing returns to education in urban areas, see Appleton, Song, and Xia (2005), Li and Ding (2004).

³¹ This question was included in the supplementary household questionnaire of the CHIP 2002 survey. Respondents were generally heads of household, and they were asked to answer questions regarding parents' wishes for their children. In a few cases, spouses of heads of household answered the question.

³² For example, many 'kulak' descendants who entered their adult lives after the mid 1950s could get into middle school and become highly qualified technicians (Szelényi 1988, 171–179). It is noteworthy that 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.

³³ Hungary began to move toward a socialist mixed economy in the 1970s. The proportion of agricultural production coming from family enterprises was stable and higher than other East European countries (Szelényi 1988, 23; see also Xavier 1988). Please note that we are aware that growing agricultural products on private plots and other family activities were an indispensable part of peasant income in the rural China under collectivization (see Zhang 1998; Sato 2003).

References

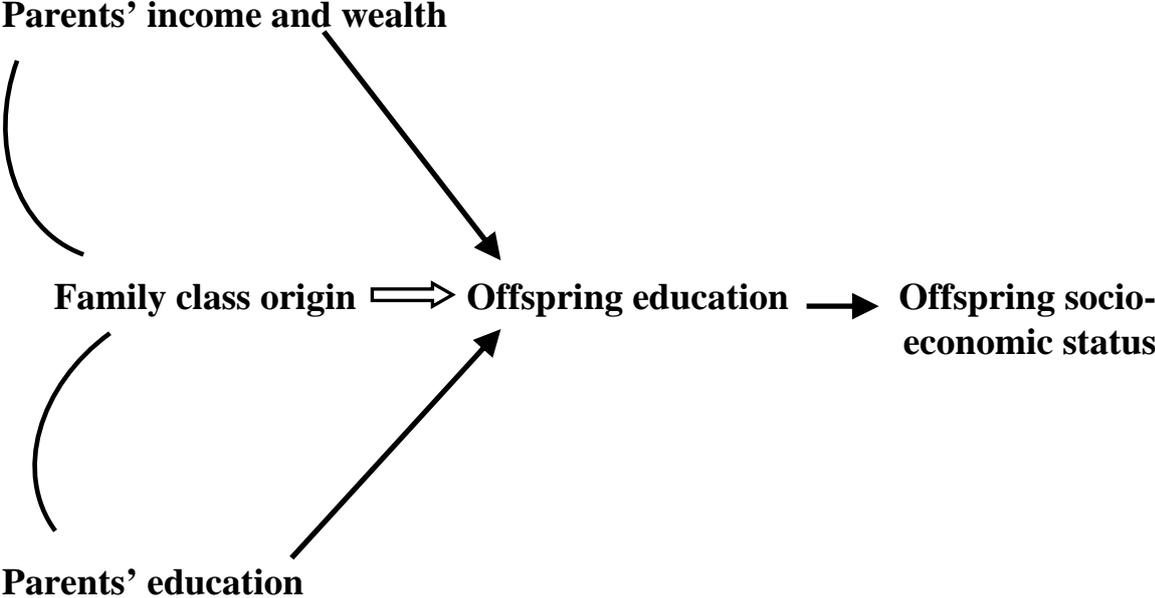
- Appleton, Simon, Song, Lina, and Xia, Qingjie. 2005. "Has China crossed the river? The evolution of wage structure in urban China during reform and retrenchment." *Journal of Comparative Economics*, 33:4, pp. 644–63.
- Bengtson, Vern, Biblarz, Timothy, and Roberts, Robert E. L. 2002. *How Families Still Matter: A Longitudinal Study of Youth in Two Generations*, Cambridge: Cambridge University Press.
- Black, Sandra, Devereux, Paul and Salvanes, Kjell. 2005. "Why the apple doesn't fall far: Understanding intergenerational transmission of human capital," *American Economic Review* 95: 1, pp. 437-49 (*NBER Working paper Series* 10066, pp. 1-47).
- Bowles, Samuel, Gintis, Herbert, and Osborne-Groves, Melissa. 2005. *Unequal Chances: Family Background and Economic Success*. Princeton: Princeton University Press.
- Cao, Jinqing, Zhang, Letian, and Chen, Zhingya. 1995. *Dangdai Zhebei Xiangcun de Shehui Wenhua Bianqian* [Socio-cultural Changes in Contemporary Northern Zhejiang Rural Areas], Shanghai: Yuandong Chubanshe.
- Cheng, Tiejun and Selden, Mark. 1994. "The Origins and social consequences of China's hukou system." *China Quarterly*:139, pp. 644–668.
- Campbell, Cameron and Lee, James. 2003. "Social mobility from a kinship perspective: rural Liaoning, 1789–1909." *International Review of Social History*, 47:1–26.
- Campbell, Cameron and Lee, James. 2006. "Kin networks, marriage and social mobility in Late Imperial China." California Center for Population Research, On-Line Working Paper Series, CCPR-018-06, University of California – Los Angeles, pp. 1–42.
- Coleman, James. 1988. "Social capital in the creation of human capital." *American Journal of Sociology*, 94: Supplement, pp. S94–S120.
- Chan, Anita, Madsen, Richard, and Unger, Jonathan. 1984. *Chen Village*, San Francisco and Los Angeles: The University of California 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.
- Fang, Hanming and Norman, Peter. 2006. "Government-mandated discriminatory policies: theory and evidence." *International Economic Review*, 47:2, 361–389.
- 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 [National Committee for Mapping]. 1989. *Zhonghua Renmin Gongheguo Guojia Nongye Dituji* [National Agricultural Atlas of the People's Republic of China], Beijing: Zhongguo Ditu Chubanshe.
- Guojia Tongjiju Renkou he Shehui Keji Tongjisi [Division for Population, Social, Science and Technology Statistics, the National Bureau of Statistics] 2003. *Zhongguo Renkou Tongji Nianjian 2003* [China Population Census 2000], Beijing: Zhongguo Tongji Chubanshe.
- Guowuyuan Renkou Pucha Bangongshi and Guojia Tongjiju Renkou he Shehui Keji Tongjisi [Population Census Office of the State Council and the Division for Population, Social, Science and Technology Statistics of the National Bureau of Statistics] 2002. *Zhongguo 2000 nian Renkou Pucha Ziliao* [China Population Statistical Yearbook 2003], Beijing: Zhongguo Tongji 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).
- Holmes, Jessica. 2003. "Measuring the determinants of school completion in Pakistan: analysis of censoring and selection bias." *Economics of Education Review*, 22:3, pp. 249–264.

- 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.
- 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.
- Li, Shi and Ding, Sai. 2004. "Zhongguo chengzhen jiaoyu shouyi(u) de changqi biandong qushi," in Li, Shi, and Sato, Hiroshi eds. *Jingji Zhuanxing de Daijia* [Price of Economic Transition], Beijing: Zhongguo Caizheng Jingji Chubanshe.
- Liu, Zhiqiang. 2005. "Institution and inequality: the hukou system in China." *Journal of Comparative Economics*, 33:1, pp. 133–157.
- Mincer, Jacob and Polachek, Solomon. 1974. "Family investments in human capital: earnings of women." *The Journal of Political Economy* 82: 2 (Part 2: Marriage, Family Human Capital, and Fertility), pp. S76–S108.
- Perkins, Tamara. 2003 "Entrepreneurial fiends and honest farmers: explaining intravillage inequality in a rural Chinese township." *Economic Development and Cultural Change*, 51: 3, pp. 719–751.
- Putterman, Louis. 1993. *Continuity and Change in China's Rural Development: Collective and Reform Eras in Perspectives*, New York: Oxford University Press.
- Sato, Hiroshi. 2003. *The Growth of Market Relations in Post-reform Rural China: A Micro-analysis of Peasants, Migrants and Peasant Entrepreneurs*, London: RoutledgeCurzon.
- Selden, Mark. 1988. *The Political Economy of Chinese Socialism*, Armonk, New York: M. E. Sharpe.
- 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.
- Song, Lina, Appleton, Simon, and Knight, John. 2006. "Why do girls in rural China have lower school enrollment?" *World Development*, 34:9, pp. 1639–1653.
- 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.

- Wang, Fei-Ling. 2004. "Reformed migration control and new targeted people: China's hukou system in the 2000s." *The China Quarterly*:177, pp. 115–132.
- Watson, James ed. 1984. *Class and Social Stratification in Post-Revolution China*. Cambridge: Cambridge University Press.
- Wei, Xin and et al. 1999. "Education and earnings in rural China." *Education Economics*. August, 7:2, pp. 167-87.
- Whalley, John and Zhang, Shunming. 2004. "Inequality change in China and (hukou) labour mobility restrictions." *NBER Working Paper*:10683.
- Xavier, Richet. 1988. *The Hungarian Model: Markets and Planning in a Socialist Economy*, Cambridge: Cambridge University Press.
- Yue, Ximing, Sicular, Terry, Li, Shi, and Gustafsson, Björn. 2007. "Explaining incomes and inequality in China," in Gustafsson, Björn, Li, Shi, and Sicular, Terry (eds.) 2007. *Inequality and Public Policy in China*, New York: Cambridge University Press, pp.88-117.
- Zhang, Yongquan and Zhao, Quangou. 1985. *Zhongguo Tudi Gaigeshi* [History of the Land Reform in China]. Wuhan: Wuhan Daxue Chubanshe.
- Zhang, Linxiu, Huang, Jikun, and Rozelle, Scott. 2002. "Employment, emerging labor markets, and the role of education in rural China." *China Economic Review*, 13: 2–3, pp. 313-28.
- 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.
- Zhao, Yaohui. 1997. "Labor migration and returns to rural education in China." *American Journal of Agricultural Economics*. November, 79:4, pp. 1278-87.
- Zhongguo Jiaoyu yu Renli Ziyuan Wenti Ketizu. 2003. *Cong Renkou Daguo Maixiang Renli Ziyuan Qiangguo* [From a Populous Country to a Country with Rich Human Resources]. Beijing: Gaodeng Jiaoyu Chubanshe.
- Zhou, Xueguang, Moen, Phyllis, and Tuma, Nancy Brandon. 1998. "Education stratification in urban China: 1949–94." *Sociology of Education*, 71:3, pp. 199–222.

Figure 1 Framework of analysis



→ *Ordinary traits*

⇒ *Rural China specific trait*

⤿ *Correlation*

Source: the author.

Figure 2 Family class origin (*chengfen*)

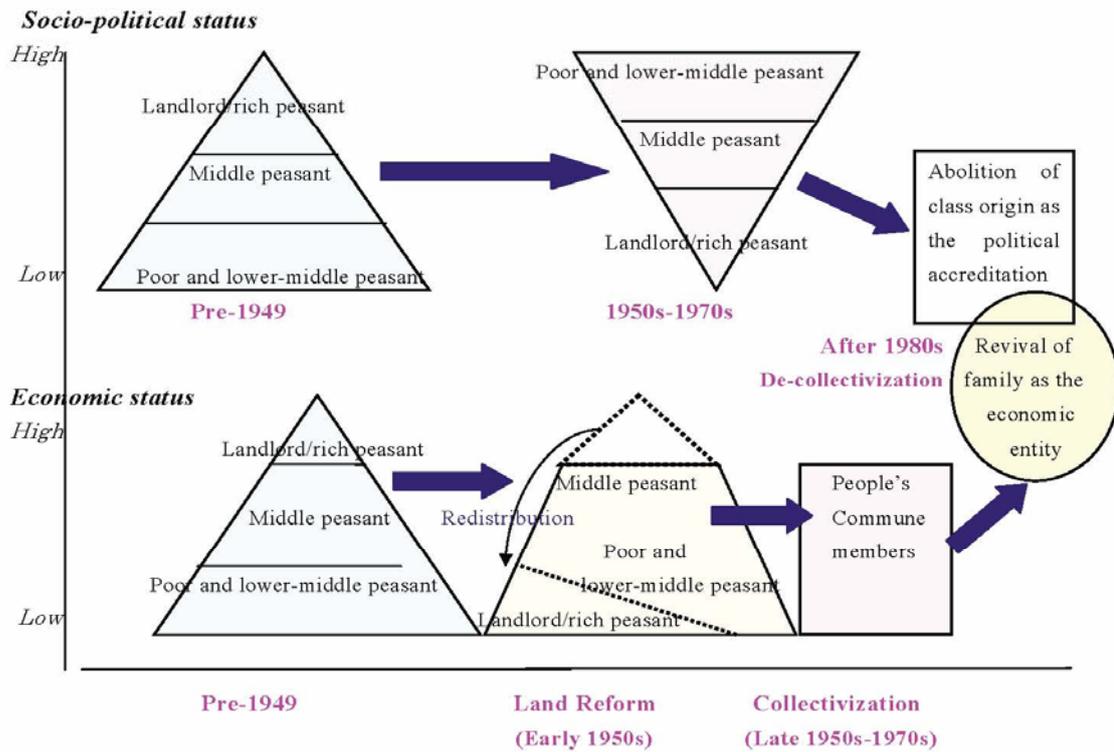
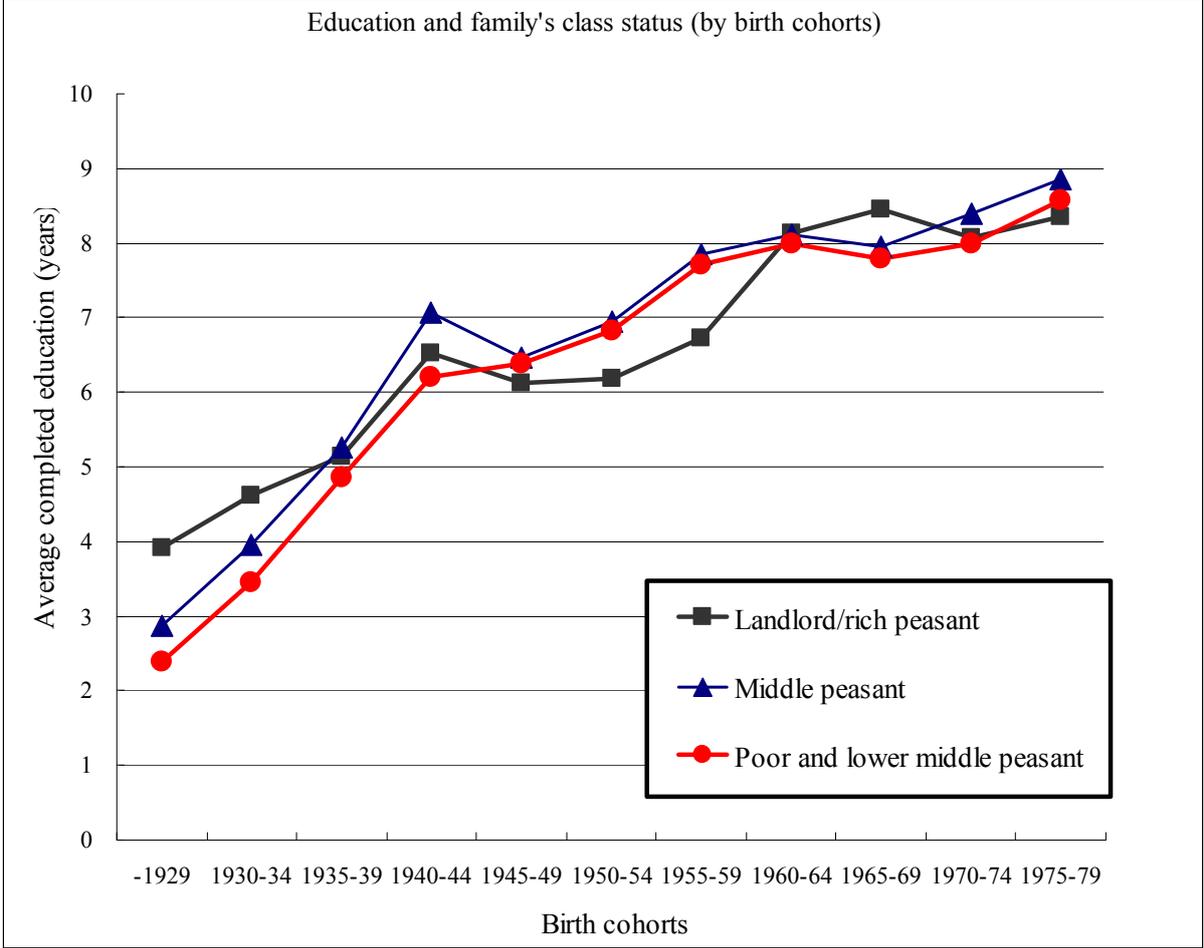


Figure 3 Average completed education of current male household members, by family class origin



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

Table 1 Structure of family class origin by regions (%)

	Overall	Agricultural macroregions			
		Northeastern	Northern	Southern	Southwestern
Landlord/rich peasant	6.4	8.0	5.9	5.6	8.4
Middle peasant	19.8	21.4	20.9	17.1	22.8
Poor and lower-middle peasant	73.8	70.6	73.2	77.3	68.8
Total	100.0	100.0	100.0	100.0	100.0
Number of observations (households)	(8821)	(898)	(3300)	(3334)	(1289)

Notes. 1. For this and all subsequent tables, household data compiled from the rural samples of the 2002 CHIP survey are used.

2. For the consistency with the investigation of father-son correlation in education in Section 3, we report the class origin of families with male heads household.

3. Agricultural macroregions are as follows. Northeastern: Liaoning, Jilin. Northern: Hebei, Shanxi, Shandong, Henan, Anhui (Huaibei region), Jiangsu (Huaibei region), Shaanxi, Gansu (the central, southern, and eastern parts), and the Ganxin region (the northwestern part of Gansu and the entire Xinjiang). Southern: Jiangsu (Huainan region), Anhui (Huainan region), Zhejiang, Jiangxi, Hubei, Hunan, Guangdong, and Guangxi. Southwestern: Sichuan, Chongqing, Guizhou, and Yunnan.

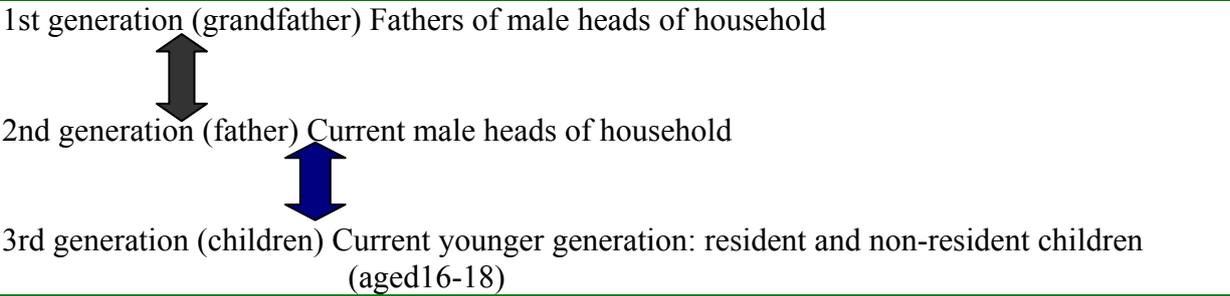
Table 2 Classification of historical cohorts

No.	Birth year (age at 2002)	Year of 12th birthday	Year of 15th birthday	Historical events	Distribution of observations (male heads of households) (%)
Pre-Maoist cohort					
1	–1944 (58–)	–1956	–1959	1949: the establishment of the People’s Republic Early 1950s: completion of the Land Reform	14.7
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 1958: the establishment of the People’s Commune. the Great Leap Forward campaign	46.7
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	19.7
Postreform cohort					
4.	1966– 1982 (–36)	1978–	1981–	1978: the third plenum of the 11th CPC Central Committee 1979: abolition of family class origin as the measurement of political accreditation the early 1980s: the de-collectivization of agriculture, collapse of the People’s Commune system	18.9
Total					100.0 (8821)

Notes. Total number of observations in parentheses. For the consistency with Section 3, we report the number of households with male heads of household.

Table 3 Framework of the empirical study

3A Three generations to be studied



3B Outcome measures

- (a) (1st–2nd generations)
Male heads of household’s years of education completed
- (b) (2nd–3rd generations)
Whether children age 16–18 have achieved or achieving 10 years or more schooling (over junior high school level educational attainment)

Table 4 Family class origin and educational level of male heads of household (the second generation): OLS estimation results

<i>Dependent variable</i> : Male heads of household's years of education		
	(1) with cohort dummy	(2) with interaction terms of class and cohorts
<i>Independent variable</i>		
Landlord/rich peasant origin	-0.069 (0.65)	0.630 (2.73)***
Middle peasant origin	0.140 (2.15)**	0.586 (3.68)***
Father's years of education	0.100 (7.11)***	0.101 (7.15)***
Mid-Maoist cohort	1.141 (15.27)***	1.357 (15.29)***
Late-Maoist cohort	2.187 (25.05)***	2.357 (23.16)***
Postreform cohort	2.114 (23.47)***	2.244 (21.35)***
Landlord/rich peasant × Mid-Maoist cohort		-1.293 (4.69)***
Landlord/rich peasant × Late-Maoist cohort		-0.586 (1.70)*
Landlord/rich peasant × Postreform cohort		-0.121 (0.37)
Middle peasant × Mid-Maoist cohort		-0.543 (2.98)***
Middle peasant × Late-Maoist cohort		-0.530 (2.46)**
Middle peasant × Postreform cohort		-0.492 (2.27)**
County dummies	YES	YES
Constant	6.605 (24.95)***	6.450 (24.19)***
Number of observations	8821	8821
Adjusted R-squared	0.188	0.191

Notes: 1. This table reports the OLS estimation results of the effects of family class origin and father's education on male head of household's education. 2. For this table and Table 5, we concentrate on father-son correlation of education. Households with female heads of household are not included. 3. The coefficients on the county dummies are not reported. 4. Omitted categories are poor and lower-middle peasant and Pre-Maoist cohort. 5. Absolute values of t statistics are in parentheses. *** denotes statistically significant at the 1% level and ** at the 5% level.

Table 5 Effect of landlord/rich peasant origin on male heads of household's education by social environment and cohorts: OLS estimation results

<i>Dependent variable</i> : Years of completed education of male heads of household				
Birth cohort	(1)	(2)	(3)	(4)
<i>Independent variables</i>	Mid-Maoist cohort	Postreform cohort	Mid-Maoist cohort	Postreform cohort
Landlord/rich peasant origin			-0.632	0.496
Entire landlord/rich peasant families			(3.83)**	(2.31)**
Large surname landlord/rich peasant families	-0.464 (1.49)	0.072 (0.16)		
Small surname landlord/rich peasant families	-0.691 (3.66)***	0.618 (2.55)**		
Middle peasant origin	0.054 (0.55)	0.078 (0.56)	0.054 (0.55)	0.078 (0.56)
Father's years of education	0.101 (4.20)***	0.134 (5.68)***	0.100 (4.20)***	0.133 (5.63)***
County dummies	YES	YES	YES	YES
Constant	8.129 (21.57)***	8.500 (12.97)***	8.132 (21.58)***	8.466 (12.93)***
Number of observations (male heads of household)	4115	1669	4115	1669
Adjusted R squared	0.155	0.130	0.155	0.130

Notes: 1. This table extracts observations belonging to the mid-Maoist and the postreform cohorts from Table 4 and compares the effect of landlord/rich peasant origin by the density of kinship relations surrounding the families.

2. Omitted dummy variable is poor and lower-middle peasant origin. The coefficients on the county dummies are not reported.

3. Absolute values of t statistics are in parentheses. *** denotes statistically significant at the 1% level and ** at the 5% level.

Table 6 Family class origin and educational attainment of current younger generation: framework and descriptive statistics

Variables	Description	Summary statistics Mean (standard deviation)
<i>Outcome measure</i>		
Dummy variable for children's educational attainment	1 if children age 16–18 are full-time student or have already completed 10 years or more education, otherwise 0	0.584 (0.492)
<i>Independent variables</i>		
Class origin and other family characteristics		
Family class origin	Dummy variables: for landlord/rich peasant; middle peasant; poor and lower-middle peasant (omitted category)	0.063; 0.187; 0.750
Educational level of the previous generation	Years of schooling completed: father; mother	7.533 (2.456); 5.792 (3.019)
Communist Party membership	1 if head of household has Communist Party membership	0.184 (0.388)
Father's birth cohort	Up to 1953 (pre-Maoist and mid-Maoist cohorts) 1954-59 (mid-Maoist cohort); 1960 and after (late-Maoist and post-reform)	0.224; 0.403; 0.373
Family wealth	Per capita family wealth in 2002 (financial assets, durable goods, housing assets, and fixed assets for production, in 1000 yuan)	9.213 (10.385)
Children's characteristics		
Gender	1 if male	0.520 (0.500)
Age	Age dummies for age 16–18	0.366; 0.311; 0.323
Regional characteristics		
Sectoral structure of county GDP	logit-transformed proportion of nonagricultural GDP to total GDP (p) at the county level in 2001. The logit-transformed variable p is defined as $\ln(p/(1-p))$.	0.299 (1.077)
Number of observations		2639

Table 7 Family class origin and educational attainment of current younger generation (the third generation): probit estimation results

Dependent variable: dummy variable for children's educational attainment (1 if resident and non-resident children age 16–18 are full-time student or already completed 10 years or more education)

	(1) Baseline	Marginal effect dy/dx	(2) with interaction terms of class origin and sectoral structure of county GDP
Independent variables			
Class origin and other family characteristics			
Landlord/rich peasant origin	0.278 (2.45)**	0.102	0.269 (2.31)**
Middle peasant origin	0.129 (1.78)*	0.049	0.137 (1.76)*
Father's years of education	0.050 (3.87)***	0.019	0.050 (3.87)***
Mother's years of education	0.044 (4.27)***	0.017	0.044 (4.28)***
Heads of household's Communist Party membership	0.214 (2.89)***	0.081	0.215 (2.90)***
Father born before 1954	0.170 (2.28)**	0.064	0.171 (2.29)***
Father born 1960 and after	0.006 (0.11)	0.003	0.006 (0.10)
Per capita family wealth	0.019 (4.27)***	0.007	0.019 (4.27)***
Children's characteristics			
Male	0.226 (4.18)***	0.087	0.226 (4.18)***
Age 17	-0.498 (7.60)***	-0.193	-0.498 (7.59)***
Age 18	-0.811 (12.33)***	-0.312	-0.811 (12.34)***
Regional characteristics			
Sectoral structure of county GDP	0.098 (3.07)***	0.037	0.098 (2.86)***
Interaction term of landlord/rich peasant × structure of county GDP			0.048 (0.46)
Interaction term of middle peasant × structure of county GDP			-0.023 (0.31)

Province dummy	YES	YES
Constant	0.934 (1.96)*	0.934 (1.98)*
Number of Observations	2639	2639
Pseudo R squared	0.154	0.154
Log likelihood	-1515.02	-1514.86
Wald chi squared	485.32	485.20

Notes: 1. This table reports the results of probit estimation of the effects of family class origin and other family characteristics on the educational attainment of children age 16–18. Children-in-law (son’s wives) are not included.

2. Estimations are conducted by clustering observations at the household level. Absolute values of z statistics robust to heteroskedasticity for grouped data (grouped at the household level) are reported in parentheses. *** Denotes statistically significant at the 1% level, ** significant at 5% level, * significant at 10% level.

3. Omitted dummy variables are: poor and lower-middle peasant origin; father born in 1954-1959; Age 16. Marginal effects for dummy variables indicate discrete change from 0 to 1.

Table 8 Parent's wish for their children's educational attainment

(%)

	Landlord/rich peasant origin	Middle peasant origin	Poor and lower-middle peasant origin	Total
Sons age 9–12				
Senior high school or above	89.2	89.6	80.3	82.6
Up to junior high school	10.8	10.4	19.7	17.4
Total	100.0 (74)	100.0 (251)	100.0 (1018)	100.0 (1343) <i>Pr</i> =0.001
Daughters age 9–12				
Senior high school or above	79.2	86.3	76.6	78.4
Up to junior high school	20.8	13.7	23.4	21.6
Total	100.0 (72)	100.0 (183)	100.0 (816)	100.0 (1071) <i>Pr</i> =0.015

Notes. 1. This table reports the association between family class origin and parent's expectation for children's educational attainment.

2. Respondents are heads of household who have children age 9–12 in 2002. Numbers of observations are in parentheses.

3. *Pr* indicates the level of significance of the chi square test of independence between family class origin and parent's wish.