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PERSISTENCE THROUGH REVOLUTIONS

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Alberto has poured his passion and creativity into this project, all the way until the very morning of his passing. We cherish and are immensely grateful for the joyful, but unfortunately short, experience of working together with Alberto. Helpful and much appreciated suggestions and comments were provided by Maxim Boycko, Raj Chetty, Melissa Dell, John Friedman, Paola Giuliano, Ed Glaeser, Claudia Goldin, Sergei Guriev, Larry Katz, Gerard Padr´o i Miquel, Elias Papaioannou, Nancy Qian, Andrei Shleifer, and participants at many seminars and conferences. We also benefited from outstanding research assistance from Yanzhao Liu, Jiabao Song, Angela Yu, and a dedicated data entry team in digitizing the County Gazetteer data, and from Jeanne de Montalembert in digitizing additional 1930s survey data.The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

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ABSTRACT

Can efforts to eradicate inequality in wealth and education eliminate intergenerational persistence of socioeconomic status? The Chinese Communist Revolution in the 1950s and Cultural Revolution from 1966 to 1976 aimed to do exactly that. Using newly digitized archival records and contemporary census and household survey data, we show that the revolutions were effective in homogenizing the population economically in the short run. However, the pattern of inequality that characterized the pre-revolution generation re-emerges today. Almost half a century after the revolutions, individuals whose grandparents belonged to the pre-revolution elite earn 16 percent more and have completed more than 11 percent additional years of schooling than those from non-elite households. In addition, individuals with pre-revolution elite grandparents hold different values: they are less averse to inequality, more individualistic, more pro-market, and more likely to see hard work as critical to success. Through intergenerational transmission of values, socioeconomic conditions thus survived one of the most aggressive attempts to eliminate differences in the population and to foster mobility.

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An online appendix is available at http://www.nber.org/data-appendix/w27053

One cannot remain rich for more than three generations.
A Chinese Proverb

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1 Introduction

A society with much intergenerational mobility of income and wealth is one in which the rich of today may be the not-so-rich of tomorrow. In a socially mobile society, inequality is more acceptable since the poor are not always stuck at the bottom of society. Researchers have highlighted that many factors could contribute to the lack of mobility, from taxation schemes to the education system and neighborhood influence. These factors often fundamentally shape individuals' access to physical capital and accumulation of human capital, two of the most important drivers for success.

Can efforts to eradicate inequality in wealth and education eliminate intergenerational persistence of socioeconomic status? Or would the rich and powerful be able to recreate their advantage in an environment where wealth and access to education have been thoroughly reshuffled? In this paper, we investigate these questions in the context of two major revolutions that occurred back to back in China — the Communist Revolution in the 1950s and the Cultural Revolution from 1966 to 1976. These revolutions represent one of the most extreme attempts in human history to eliminate the advantages of the elite, to eradicate inequality in wealth and education, and to erase cultural differences in the population, especially between the rich and the poor. The revolutions aimed to shut down two critical channels of intergenerational transmission: transmission through income and wealth (e.g., inheritance) and transmission through formal human capital accumulation (e.g., schooling). Specifically, during the Communist Revolution and the subsequent Cultural Revolution, land assets were expropriated from the rich and redistributed to the poor, secondary schools and universities were closed throughout the country, and the values associated with being educated and being rich were heavily stigmatized.

Take the family history of Guangyu Huang as an example. Guangyu was born in 1969. His grandfather was a rich landlord in Guangdong, who lost most of his land and assets during the Communist Revolution. Guangyu's father, Changyi Huang, grew up in the midst of the Communist and Cultural Revolutions, and as a result received no inheritance, no formal education, and eked out a living by extracting persimmon oil. Guangyu grew up after the revolutions, but lived by collecting trash with his siblings during his early childhood. Eventually, Guangyu graduated from Renmin University, one of China's most prestigious colleges. Guangyu's fate changed in 1987 when he seized the opportunity of the first wave of private enterprise boom during the reform era of China, and founded GOME Electronics. GOME became a huge success, making Guangyu the richest man in mainland China between 2004 and 2018, with a net worth of RMB 36 billion (approximately US$ 5 billion).

While this is certainly an extreme example, we trace the socioeconomic conditions of the pre-revolution elite and their descendants, and show that Huang's family story represents a more general pattern across China: despite extraordinary repression, the descendants of the pre-revolution economic elite are significantly better off today than the descendants of the pre-revolution poor. We show this by following three generations in rural China: the "grandparents," i.e., the generation that grew up before the revolutions, thus roughly individuals born before 1940; the "parents," i.e., the generation that grew up during the Communist and Cultural Revolutions — those born between, say, 1940 and 1965, — who experienced shocks such as the expropriation (or redistribution) of land and school closure; and the "children" — the third generation, — who were teenagers by the time the Communist and Cultural Revolutions had ended, secondary schools and universities had reopened, and China had started to implement the reforms that would enable private asset accumulation and private enterprises again. These "children" are individuals born roughly after 1965.

To systematically examine various socioeconomic outcomes among these three generations, we rely on three main data sources. First, to measure land asset ownership across Chinese counties before and after the Communist Revolution, we digitize all of the *County Gazetteers*, a set of archival records that each county keeps to chronicle important events. This allows us to systematically examine not just the levels, but, crucially, the distribution of land ownership by residents in a particular county in the 1940s and 1950s, just before and after the Communist Revolution. This, to the best of our knowledge, is the first national data set on historical inequality in land assets that has been systematically collected in China. Second, to measure contemporary inequality, we use the 2000 Population Census and construct inequality in residents' housing situation in the corresponding counties. Third, to measure socioeconomic outcomes as well as values and attitudes among descendants of the pre-reform elite and non-elite, we use the China Family Panel Studies, a large, representative survey of Chinese households. We link individuals in the survey to pre-revolution asset ownership levels based on the "class labels" assigned to their grandparents at the beginning of the Communist Revolution (see Section 2.2 for details on "class labels").

We first document that the Communist and Cultural Revolutions were successful in homogenizing the "parents" generation. The wealth expropriation during the Communist Revolution was thoroughly implemented. The Land Reform (1947–1953), a core component of the Communist Revolution, confiscated land from the landlords and reallocated it equally to everyone in the village. Landlords, who used to own more than 6 times as much land per household as the rest of the population, no longer owned more than poor peasants in the immediate aftermath of the Communist Revolution. The county-level Gini coefficient in land ownership decreased from 0.5 right before the Land Reform to below 0.1 right afterwards. The Cultural Revolution was also effective in leveling the educational advantage of the former elite households. Those in the "parents" generation from an elite background were discriminated against in access to education and did not achieve a higher level of education than those from non-elite households — if anything,

the elite did worse in educational attainment than the non-elite amongst the "parents" generation. We also show that the pre-revolution elite, in the "parents" generation, did not enjoy differential access to resources, as they were more likely to suffer from hunger during the famine and much less likely to be members of the Communist Party, a marker of political and social status after the revolutions.

The Communist and Cultural Revolutions effectively made the "parents" generation of the pre-revolution elite enjoy no more tangible advantages in wealth and educational attainment than their non-elite peers. In fact, counties that were among the most unequal in terms of land assets before the Communist Revolution became the most equal in real estate wealth in 2000.[1] Such a reversal, to the best of our knowledge, has never been documented and suggests that the heavy-handed revolution may have put historically unequal regions in China on a different path, toward relatively more equality. This lies in contrast with many failed land reforms and attempts to confiscate wealth from the very rich in recent history in many other parts of the world, and Latin America in particular.

However, despite the immediate and immense impact of the Communist and Cultural Revolutions, the patterns of inequality that characterized the "grandparents" generation are re-emerging among the third, "children" generation. By 2010, individuals whose grandparents were part of the pre-revolution elite earned 16–17 percent higher income each year, and have completed more than 11 percent additional years of schooling than those from the non-elite households. Since the pre-revolution elite constituted approximately the top decile of the population, the income gap among the "children" generation implies that individuals whose grandparents belonged to the pre-revolution elite have a 14.5% chance of staying in the top decile. This is even higher than the persistence rate of the top decile (extrapolated from the two-generation transition matrix) in the U.S. — 14.1% (Chetty et al., 2014), and much higher than that in Canada — 11.1% (Corak and Heisz, 1998). To put it differently, while the revolutions were explicitly aimed to reverse the order of the rankings of socioeconomic status, especially between elite and non-elite households, they did not manage to do so beyond one generation. The persistence rate of the elite over three generations is much higher than zero, and the Chinese revolutions did not raise China's social mobility above the levels reached by two exemplifying capitalist and market economies.[2]

What explains the resurgence of the pre-revolution elite among the children generation? The effect of the Land Reform and the Cultural Revolution on the parents generation indicates that the two formal channels of transmission — inheritance (physical capital) and access to education (formal human capital) — are unlikely to explain the persistence. A related possibility would be that the pre-revolution elite may have managed to hide wealth from the confiscation. For those

[1] While urbanization could lead us to overestimate the reversal in land and real estate inequality, taking the urbanization rate into account does not alter the pattern of reversal in county inequality — see Section 5 for a discussion.

[2] One may argue that without the revolutions, social mobility in China might have been much lower than what it is today. Such a counterfactual is inherently difficult to assess. Existing genealogical evidence shows that intergenerational mobility was quite low in China between 1300 and 1900 (Shiue, 2018).

who stayed in Mainland China, this was very unlikely since private assets of any sort were illegal until the 1980s. Transferring wealth overseas was a viable, but largely irrelevant, option for the rural population that we study here.[3]

We find that intergenerational transmission of values is an important reason that explains this rebound. Individuals whose grandparents were part of the pre-revolution elite exhibit different values and attitudes today: they are less averse to inequality, more individualistic, and more likely to consider effort as important to success. This is in line with a revealed preference for working longer hours during workdays and spending less time on leisure during weekends. Such values can be considered as "informal" human capital, as it is acquired and transmitted within the household, rather than through formal education institutions that were absent due to the revolutions. Consistent with vertical transmission of values, these patterns are much stronger for those among the "children" generation who co-live with their parents, and absent for those whose parents have passed away prematurely, suggesting that time spent together through co-residence could be critical for values to be passed down through generations.[4] The gap in income between the grandchildren of landlords and rich peasants and their peers from non-elite households largely disappears once we control for their differences in educational attainment and expressed values, suggesting that these are important channels in the rebound of pre-revolution elite advantages. Intriguingly, while those among the parents generation in pre-revolution elite households are not significantly more likely to express strong work ethics and valuation of effort than their peers without elite background, they work longer hours and thus exert more effort at work. This suggests that while the Communist and Cultural Revolutions have successfully stigmatized some values publicly expressed, privately held values could still be transmitted across generations through actual behavior. The intergenerational transmission thus allowed certain values such as work ethics to survive one of the most aggressive attempts to eliminate differences among people in recent history.

The survival of social networks, especially those based on traditional families, is a complementary channel of persistence. We find supporting evidence that such networks are a more important component in the lives of individuals whose grandparents were part of the pre-revolution elite.[5] This suggests that stronger pre-revolution networks among elite households may have survived the revolutions, despite the fact that the parents generation was poor and their networks thus less economically valuable.

This paper bridges two strands of literature: on social inequality and mobility, and on cultural persistence within families. Studies of intergenerational transmission of socioeconomic status typ-

[3] Another possibility would be policies favoring the pre-revolution elite during the Reform and Opening era. To the best of our knowledge, there are no such policies. Yet another possibility is differences in innate characteristics such as genes and personality traits; we do not have direct evidence to support or reject this interpretation.

[4] The choice of cohabitation is of course partly endogenous, but the early death of parents less so.

[5] Such interpersonal connections have been shown in the sociological literature to play a major role in post-revolution China (Gold, 1985; Walder, 1986; Yang, 1994; Bian, 1997).

ically explain persistence by formal channels: inheritance (physical capital) and the reproduction of productive skills and networks through education in elite schools (formal human capital). An important omission is the informal channels of transmission, in particular, the transmission of values — namely, a set of "cultural traits" and attitudes — from parents to children.[6] We contribute to these two strands of literature by showing that value transmission within households, and especially the robustness of this transmission even when formal transmission channels are shut down, have important consequences on intergenerational mobility.

Both strands of the literature are enormous, and we simply cannot do justice to all previous works. On social inequality and intergenerational mobility, Chetty et al. (2014) and Chetty and Hendren (2018a,b) explore patterns of social mobility in detail in the United States, Alesina et al. (2018) compare the U.S. and several countries in Europe, and Piketty et al. (2019) document the rising inequality in wealth due to capital accumulation and the resumption of private property in China. Alesina et al. (2019) study Africa, Asher et al. (2019) investigate educational mobility across Indian regions, and Narayan et al. (2018) construct measures of intergenerational mobility in education and income across many countries using survey data. Closest to our paper in context, De la Rupelle and Li (2012) and Treiman and Walder (2019) both study the persistence of inequality in China in the second half of the 20th century using household survey data. This paper differs from theirs by showing the evolution of inequality, both at the county (using the County Gazetteers) and at the household level over three generations, and by investigating channels of transmission.[7] All these works focus on two generations, with the rare exceptions of Boserup et al. (2014), Long and Ferrie (2018), and Shiue (2018).[8] We contribute to the literature on social mobility by providing one of the first evidence of intergenerational mobility across three generations in terms of asset ownership, and by relating mobility to the transmission of cultural values within households.

We also contribute to the literature on the persistence of cultural values across generations,

[6] Ample evidence documents that vertical transmission of values could lead to long-term persistence of certain values within a family lineage. Bisin and Verdier (2001) provide a workhorse model of intergenerational transmission of values. Alesina and Giuliano (2015) review recent empirical evidence regarding this type of transmission.

[7] Treiman and Walder (2019) focus on the impact of class labels on life chances as measured in a 1996 survey; De la Rupelle and Li (2012) focus on heterogeneity in the impact (measured in 2002) of the revolutions due to the heritage of the Long March. In line with their research questions, they look at the effect of household class labels on post-Reform outcomes and do not study the leveling of conditions across elite and non-elite households during the Communist and Cultural Revolutions ("parents" generation). A related paper is Hanley and Treiman (2004), who study the resurgence of property relations in six post-Communist European countries. Interestingly, they find a similar resurgence as shown by our results in China; they however argue that it is mostly explained in their context by incomplete expropriations and later restitution policies, although they do find some evidence of "indirect transmission" through educational attainment and high occupational status during the Communist period — channels all shut down during the Chinese revolutions.

[8] Boserup et al. (2014) estimate intergenerational wealth mobility across three generations in Denmark, and find that persistence across three generations can be higher than that across two. Similarly, Long and Ferrie (2018) find substantial persistence of occupational status between grandfathers and grandsons, even controlling for the fathers' occupations, between 1850 and 1910 in the U.S. and Britain. Shiue (2018) uses biographical information in genealogies to study intergenerational mobility (in terms of status) over five generations between 1300 and 1900; she finds that transmission from grandparents to grandchildren has little impact on the latter's status, compared to transmission from fathers to sons or from uncles to nephews.

surveyed by Alesina and Giuliano (2014, 2015). Our paper relates in particular to studies of the transmission of values promoting effort, education, and delayed gratification (see, among others Galor and Özak, 2016; Dohmen et al., 2018; Figlio et al., 2019), as well as to the literature in sociology originating in Max Weber's "culturalist" approach (see, for instance, Szelényi, 1988, on the transmission of an "entrepreneurial spirit" in post-Communist Europe).[9] More closely related to our empirical context, Chen et al. (forthcoming) find that a culture of valuing education is persistent among localities in China that are historically more densely packed with individuals who excelled at the imperial civil service examinations. While we focus on how such values could be transmitted from the grandparents generation in the midst of revolutions, it is important to note that the values of the elite could be the result of a much longer evolution.

Our results are related to several recent papers that examine the persistent impact (or lack thereof) of large shocks to a specific group. Acemoglu et al. (2011) document that the Holocaust and the disruption of social structure that it entailed led to long-term decline in local social, economic, and political conditions, which suggests a negative effect of mass murder on the remaining community. The affected group themselves, on the other hand, could partially recover from the negative shock: Ager et al. (2019) show that the white southern households that lost substantial slave assets after the U.S. Civil War had recovered in income and wealth by 1880; and Becker et al. (2020) demonstrate that forced migrants from eastern Poland after the Second World War invested more heavily in human capital in subsequent generations, a behavior that the authors explain by preferences shifting away from physical, material possessions. In a context more directly related to our study, Chen et al. (2015) find that urban dwellers in China exhibit high mobility in terms of educational attainment among the generation that grew up during the Cultural Revolution, and low mobility (i.e., high persistence) for the cohorts that grew up after the Revolution; Xie and Zhang (2019) show that the grandchildren of the pre-Land Reform elites attained more education.[10] We contribute to these existing works by examining a broad set of outcomes among the victims of one of the most aggressive attempts to eradicate inequality in recent history, during which both physical assets and formal human capital accumulation were disrupted. We extend the persistence phenomenon beyond educational attainment, and we present evidence on the mechanisms of such persistence across generations.

Our paper also relates to the literature on the impact of the Communist and Cultural Revolutions in China. Roland and Yang (2017) show that individuals who missed the re-opening of universities at the end of the Cultural Revolution are more likely to believe that effort is not important for success even decades later; Chen et al. (2017) demonstrate that making the episode of

[9] Szelényi (1988) puts forward the transmission of "values and ideals" across generations through early socialization in the family — in particular, "those related to autonomy and risk taking, resistance to being subordinated to the bureaucratic order and to accepting ascribed ranks in hierarchy, desire to be one's own boss, value attached to hard work, and willingness to delay consumption may be decisive in the formation of an entrepreneurial class."

[10] Interestingly, Bautista et al. (2020) document that descendants of those who were deprived of educational opportunities during Pinochet's rule in Chile persistently did worse in education attainment.

the Land Reform more salient makes the beneficiaries (those who gained land) more supportive of state redistribution, and the victims (those who lost land) more averse to redistributive policies; and Chen and Yang (2019) show that individuals with traumatic experiences during the Communist Revolution — those who experienced the Great Chinese Famine at the end of the 1950s and early 1960s — update their beliefs on government trustworthiness based upon both their starvation experiences and the context of such experiences. In this paper, instead of examining the extent to which specific values, preferences, and beliefs are shaped by experiences during the Communist and Cultural Revolutions, we investigate, taking the two revolutions as a whole, whether such aggressive and traumatic revolutions are sufficient to uproot existing differences between pre-revolution elite and non-elite households in the long run, across three generations.

This paper is organized as follows. Section 2 provides institutional and historical background on the Communist Revolution and the Cultural Revolution in China. Section 3 describes our data collection effort. Section 4 shows that the revolution was successful in eliminating inequality and homogenizing culture for one generation, that of the "parents." Section 5 presents our results on how the grandchildren of the pre-revolution elite (the "children" generation) are substantially richer today, as well as on the transmission of values from grandparents to grandchildren. Section 6 discusses various concerns related to data, robustness of the results, and alternative interpretations. The last section concludes.

2 The Communist and Cultural Revolution

In this section, we describe the Communist Revolution and the Cultural Revolution. Many books have been written about the historical details (e.g., MacFarquhar and Schoenhals, 2006; Dikötter, 2016); here we focus on the particular aspects of the revolutions that intended to eradicate the advantages of the pre-revolution elite, including confiscating their assets, removing their access to secondary and higher education, and even stigmatizing attitudes and values that they might have held prior to the revolutions.

2.1 The Communist Revolution and Land Reform

The Communist Revolution was a series of movements that allowed the Chinese Communist Party to consolidate political power throughout China toward the end of the Chinese Civil War.[11] The Land Reform during the Communist Revolution was a crucial effort aimed at gaining the support of the rural masses for the new regime (Kung et al., 2012). The Land Reform started in 1947 in the newly "liberated" regions under the Communist Party's rule and concluded in 1953 when the reform reached the entire country. It is one of the most extreme examples of wealth equalization

[11] Some of the background description here is also shown in Chen et al. (2017). In this paper, we primarily focus on the rural component of the Communist Revolution, namely, the Land Reform. A parallel movement of wealth confiscation and redistribution was carried out in the urban sector, often named the "Socialist Remold of Capitalist Enterprises."

in a short period of time in human history — at least 43% of all land assets in rural China changed hands during the reform (Wong, 1973a).

Before the Land Reform, landlords owned 6 times more land (per capita, on average) than poor peasants (see Section 4 for details). In other words, while land assets were unequally distributed prior to the Land Reform, the Chinese context does not resemble the extreme land concentration observed in Latin America, characterized by the predominance of large plantations or latifundia — e.g., 92% of cultivated land in Bolivia in 1952 before the land reform (Wagner, 1989). Landlords in China owned a relatively small amount of land, working on the land themselves, and sometimes hiring labor (Fei et al., 1992). Thus, Chinese landlords were closer to well-off farmers in small-scale farming economies than rentiers who own huge plots of land.

The Land Reform was formalized and implemented as a nationwide policy by the *Agrarian Reform Law* in late 1950. The law was based on *China's Agrarian Reform Law Framework* approved in 1947 and built upon the Party's earlier land reform experiences. The law emphasizes the Communist Party's commitment to expropriating the landlord class and to advocating the proprietorship of the peasantry. Article 1 of the law states the overarching principles of the Land Reform:

> *"The land ownership system of feudal exploitation by the landlord class shall be abolished and the system of peasant land ownership shall be introduced in order to set free the rural productive forces, develop agricultural production, and thus pave the way for New China's industrialization."*

The rest of the law lays out specific guidelines for transferring land ownership from landlords to poor peasants. Section 2, titled "Confiscation and Requisitioning of Land," orders the landlords' land, cattle, "excessive production tools," and real estate properties to be confiscated (e.g., Article 2). Section 3, "Distribution of Land," further instructs that the confiscated land and other assets should be distributed uniformly, fairly, and reasonably among landless peasants and poor peasants who owned very limited assets (e.g., Article 10).

The *Agrarian Reform Law* establishes a set of uniform principles that guide decision-making and the implementation of the Land Reform across China.[12] The Communist Party emphasized that peasants should actually receive land and landlords be expropriated. To maximize the chances that implementation would go smoothly and efficiently, the central government devolved all land reform responsibilities to local governments, leaving considerable flexibility to interpret, adapt, plan, and carry out the Land Reform in each locality.[13]

The redistribution process typically consisted of two stages. First, the locality formed *ad hoc*

[12]The *Agrarian Reform Law* was nationally oriented in tone and content, so that more detailed rules and explicit regulations pertaining to implementation needed to be provided in the form of supporting documents, including implementation legislation and important speeches by the central government and provincial authorities.

[13]This heavy emphasis on the informal and often personalized approach of implementing the Land Reform reflects the reality that the core field staff of the reform — local cadres complemented by the Peasants' Association — were technically under-trained but politically dedicated (Wong, 1973a).

committees and teams, mobilizing the rural masses via propaganda and indoctrination, and crucially, assigning *class labels* to families based on investigations of land holdings and discussions in mass meetings (Hinton, 1966). (We discuss class labels in detail in Section 2.2.) Second, based on the class labels, land and other production tools were confiscated from the landlords and rich peasants, and redistributed to the landless and poor peasants. The expropriation and redistribution were operationally one process, and in the vast majority of the cases, what was expropriated has been entirely redistributed (Wong, 1973b).[14] The Land Reform was a zero-sum game, and the government made sure that the victims complied and the beneficiaries indeed received asset transfers. Both physical and psychological violence (or the threat of violence) were deployed during the confiscation process to suppress opposition from the expropriated households. A militia was organized for the purpose of the Land Reform, and it is estimated that for every landlord there were 8 organized peasants assisting the Land Reform implementation, among whom one was armed (Wong, 1973a).[15]

Property rights over land during this period were complicated. The Land Reform confiscated land from the landlords and rich farmers, and redistributed the land to the poor and landless. During this period, effective private ownership over land was still allowed. In 1954, the first Constitution of the People's Republic of China abolished private land ownership. Individual farmers could lease land from the state and grow crops, although no rents were effectively paid to the state. The endowed land that individual farmers could grow food on was essentially land (re)allocated to them during the Land Reform (Lardy, 2008).

While scholars debate on the exact magnitude of land redistribution during the Land Reform, it has undeniably resulted in a "monumental and profound" socioeconomic revolution that affected almost every rural resident in China (Huang, 1995). In 1953, the central government declared that the Land Reform had achieved its goals in most of China. The landlord class was essentially eliminated, and their asset level brought down to that of middle or even poor peasants. Landless, poor, and middle peasants received farmland for cultivation amounting to 43% of total land acreage in China, according to some estimates — among others, see, Wong (1973b); Lippit (1974); Perkins (2013). The far-reaching social impact of the Land Reform is described by Schurmann (1971) as follows:

> [...] *as a social revolution, land reform succeeded in destroying the traditional system of social stratification in the rural areas. The old rural gentry, whether based on the village or residing in towns, was destroyed. A social element, which had exercised leadership in the village by virtue of its status, its ownership of land, and its access to power had ceased to exist.*

[14] Appendix Figure A.1 presents a photo taken during the Land Reform when rural residents were measuring the land in preparation for the redistribution.

[15] Forced confessions in small groups and mass trials attended by tens of thousands were also employed to induce submission through intense psychological pressure.

2.2 Class labels

In order to facilitate asset confiscation and subsequent redistribution during the Communist Revolution, each household was assigned a class label based on what they owned. The specific class labels (in both rural and urban sectors) are listed as follows:

	Rural	**Urban**
Non-elite	Hired labor	Poor peasants in the city
	Poor peasants	Workers
	Middle peasants	Employees
Elite	Rich peasants	Enterprise owners
	Landlords	Capitalists

More specifically, to supplement the *Agrarian Reform Law* and to aid the implementation of the Land Reform, the State Council issued a document titled "Decisions on Assigning the Class Labels in the Rural Sector" in 1950. It called local reform committees to divide up all rural residents into the broad classes listed above, and these uniform class labels would act as the basis for redistributive decisions during the Land Reform.

The class label was the only criterion used for asset redistribution. Those who were classified as landlords or rich peasants had their "excessive" assets confiscated, and those classified as middle peasants, poor peasants, and hired labor received asset transfers. Landlords and rich peasants were also the joint target of class-based discrimination until the 1980s (see Bian, 2002, for a review). We thus group the landlords and rich peasants as the pre-revolution elite (approximately 6% of the population in the rural sector) and the rest as non-elite, according to the asset redistribution (during the Communist Revolution) and discrimination (until after the Cultural Revolution) that they faced. We investigate below alternative definitions of the elite. Our baseline results are robust to considering only the rich peasants, namely the "working" elite without the rentiers.

While the exact cutoffs used to categorize the class labels were often left to the discretion of local Land Reform committees, the State Council document offered general guidelines. Importantly, these labels were determined by family asset ownership prior to the reform,[16] and particularly land assets in rural areas: all members of a family shared the same label. For example, regarding household labeling as "landlord" versus "rich peasants," the document stipulated that "in the landlord households, if there were people who regularly worked, and at the same time hired people to work on some of the land, then as long as the land rented out was more than 3 times as large as the land tilled by household members, these households should be classified as landlords

[16]Contrary to later political campaigns, no quotas were set during the Land Reform — e.g., in terms of a number or share of landlord labels (Kung et al., 2012). Local leaders may have however felt pressure to identify at least some "targets for class struggle" (Friedman et al., 1991).

rather than rich peasants." Such a rule suggests that landlords working on the land they owned was a common phenomenon in rural China.

Until the *Agrarian Reform Law* was repealed in 1987, the label was stable over time and through generations, making it a major element of family and personal identity: once a label was assigned it was rarely revised (Unger, 1984), and forging class labels was nearly impossible, for three reasons. First, class labels were common knowledge in villages (Wemheuer, 2019), and the new elite with "good" class backgrounds had little incentive to collude with "bad" elements. Second, a double record of class labels was kept: one in individual dossiers, which in rural areas were held by the collective (4,000–5,000 households on average), and another, separate record held by central security organs for Party cadres (Cheng and Selden, 1994; Wemheuer, 2019); both records were inaccessible to the individuals concerned. Third, class background was subject to potential rechecks by external teams during political campaigns (Brown, 2015), and "providing false or misleading information could lead to serious consequences if, for example, a "landlord who had escaped the net" was uncovered" (Wemheuer, 2019). While the initial assignment of the class labels signaled the regime's judgment about the "inherent loyalties of families" (Walder and Hu, 2009), class labels were preserved along patriarchal lines regardless of the actual political inclination and behavior of individuals. Moreover, each citizen was required to know her own class label. In other words, the elicitation of class labels allows researchers to trace family lineages, in particular the broad level of household assets prior to the revolutions. We describe in greater detail the elicitation of class labels in our data in Section 3.

The motivation behind class labels was to identify and therefore discriminate against the former elite and eliminate any educational or income advantage they might retain over the masses, consistent with the overarching goal of the Communist Revolution and the subsequent Cultural Revolution. Class labels determined in particular the likelihood of admission to high school and college, job assignments, promotions, and access to Party membership (Kraus, 1981; Unger, 1982; Lee, 1991). One unintended consequence of the system was, however, to remind people of who their parents and grandparents were, perhaps making family history and identity more salient.

2.3 The Cultural Revolution

The Cultural Revolution is a massive sociopolitical movement launched by Mao Zedong in 1966, intended to preserve the fruits of the Communist Revolution. While it began as a purge of "disloyal" Communist Party officials, its scope quickly widened to target all elite groups and authority figures, leading to a decade long of chaos and violence until Mao's death in 1976. We focus here on two main aspects of the Cultural Revolution: its stance toward the former elite, and its disruptive education policy.[17]

[17]The mass mobilization at the core of the Cultural Revolution led to large-scale disorganization. Before the imposition of martial law, the Cultural Revolution caused in less than two years a complete collapse of the state apparatus and severely disrupted production. Industry value added dropped from 44.6 to 12.6 million Chinese yuan (in constant

Since its inception, the Cultural Revolution was concerned with status inheritance. One of its primary goals was to prevent the pre-revolution or emerging elite from passing down their privileges to their offspring (Whyte, 1973; Deng and Treiman, 1997; Andreas, 2009) and thus "de-stratify" Chinese society (Parish, 1984). The initial motivation was to prevent the entrenchment of a bureaucratic elite, whom Mao viewed as a threat to the revolution. He feared that they became "a 'privileged stratum' and take the capitalist road, as allegedly [had] happened in the Soviet Union" (Bernstein, 1977). The scope of the Cultural Revolution quickly widened to encompass all high-status groups. Former elite households often managed to secure elite professional occupations in the Communist regime (Rosen, 1982; Unger, 1982; Andreas, 2002; Walder and Hu, 2009). This fact, combined with the view that individuals with a "bad" class background — namely those with elite class labels — were inherently "revisionist," or hostile to the revolution, justified in the eyes of Mao further discrimination and violence during the Cultural Revolution. In an interview given in 1965 to the French Minister of Cultural Affairs, André Malraux, Chairman Mao claimed that there was a broad "revisionist layer" in China, "large not in numbers but in the influence it exerts. This layer is made up of the former landlords, former rich peasants, former capitalists [...], and part of their children" (Andrieu, 1996). The goal then was to completely eliminate any remaining advantage of the former elite and their descendants over the masses.

The risk that the elite might be able to maintain their influence through education lies behind the radical and disruptive educational policy initiated during the Cultural Revolution (MacFarquhar and Schoenhals, 2006). The revolution severely disrupted higher education in two main ways. First, almost all high schools and colleges were shut down between 1966 and 1968, and most universities remained closed until 1972 (Bernstein, 1977; Unger, 1982).[18] Second, merit-based admission into higher education was suspended throughout the Cultural Revolution. When universities reopened in 1972, admission was primarily based on class labels (at the expense of the elite, of course) and political achievements rather than academic credentials (Shirk, 1982). The only eligible applicants were workers, peasants, and soldiers, except for small quotas (below 5%) established for the "educable children [of class enemies]" (Deng and Treiman, 1997).[19]

Besides disrupting education, the Cultural Revolution induced a wide range of disturbances across Chinese society. The inheritance of culture and values from the pre-Communist era was regarded with suspicion: teachers became the targets of "struggle sessions," which included public humiliations, beatings, and torture (Wang, 2001).[20] An entire generation of urban students

1990 prices) between 1966 and 1967, and it would not recover until 1980 (Dong and Wu, 2004).

[18] Appendix Figure A.2 presents a photo of students at Peking University, one of the best universities in China, during the Cultural Revolution, where students gathered to chant revolutionary slogans.

[19] From the outset, the Chinese Communist Party oscillated between promoting mass education and a meritocratic elite with the technical skills and expertise necessary for economic development (Deng and Treiman, 1997; Andreas, 2009; Chen et al., 2015). In some years, admission into higher education was granted by "recommendation only," and priority was given to workers, peasants, and children of "revolutionary cadres and martyrs" (Deng and Treiman, 1997). In other periods, the national college recruitment examination was re-established. Applicants with an undesirable class background were, however, systematically discriminated against (policy of "priorities among equivalents").

[20] Children were also encouraged to expose their parents' counter-revolutionary behaviors, representing a broad

was sent to the countryside for political reeducation through manual work and contact with the masses (the "Sent-Down Movement"). Zhou (2004) shows that the probability of being sent down increased with the father's education attainment. The separation of children and parents during formative years of their lives could have significant implications on the vertical transmission of cultural values. However, this is less of a concern for our study as we focus on rural households, none of which sent away children during the Cultural Revolution since there were already residing in the countryside.

3 Data

3.1 Distribution of land wealth at the county level

In order to document the immediate effect of the Land Reform during the Communist Revolution on wealth distribution, in particular that of land assets, we digitize the *County Gazetteers* and systematically collect land distribution information around 1950 throughout rural China. The County Gazetteers, published in the 1990s, are the county- or city-level archives that cover the historical period from 1949 to 1986. Each locality maintains its own gazetteer, compiling local narrative and statistical information on historical development, socioeconomic progress, major events, and notable instances. Data quality and completeness varies across counties. Some counties gather quantitative data, while others just rely on descriptive narratives.

We manually collect land ownership and population by the five rural social classes corresponding to the class labels assigned during the Communist Revolution: landlords, rich peasants, middle peasants, poor peasants, and landless peasants.[21] The distribution of land ownership is available both immediately before and immediately after the Land Reform. Our data set is, to the best of our knowledge, the first national data set on historical inequality in land assets that has been systematically collected in China. Due to the decentralized nature of the gazetteer compilation, such land ownership information is not always recorded in the same format. For example, some counties record land ownership information in table format (see Appendix Figure A.3 for an example), while others embed such information in unstructured narratives (see Appendix Figure A.4 for an example).

Our data collection procedure is based on the county name list in 2000. We identify 639 counties in the gazetteers with the pre-Land Reform land distribution data necessary to calcu-

effort to weaken the nuclear family structure.

[21] Landlords sometimes lived in urban areas and had only tenuous links to the villages where they owned land (Liu, 2007; Huang, 1995). Such "absentee landlords" should have little effect on our estimates of pre-Land Reform inequality or our analysis of persistence. First, absentee landlords usually accounted for a small share of the landlord population, especially in the north (Huang, 1985; Kung et al., 2012). Second, the most salient variation in the prevalence of absentee landlordism is across provinces (Liu, 2007; Kung et al., 2012) and is thus accounted for by province fixed effects throughout our specifications. Third, the land owned by absentee landlords is counted in the Gazetteers, as such land constituted a large share of land transfers in provinces where absentee landlords existed (Roll, 1974).

late within-county inequality, i.e., with population and land ownership data for hired peasants, poor peasants, middle peasants, rich peasants, and landlords, corresponding to the 5 groups of the population as categorized by the class labels.[22] Only 576 of them can be matched with counties in 2000. Out of the 1,290 rural counties in China in the 1950s, 418 have no pre-Land Reform records, and 296 do not provide sufficient information to construct reliable county-level inequality measures.[23] Our baseline specifications further restrict the sample to the 410 counties that have more than 80 households in our random 0.1% extract of the 2000 Population Census; we carry out extensive robustness checks to show that our results are not sensitive to this cutoff.

To ensure that land distribution measures are comparable across counties, we standardize the pre- and post-Land Reform land ownership and population data to the same units (e.g., land ownership counts are converted to per capita, rather than per household as originally reported by some counties). We construct various inequality measures to describe the landscape of wealth inequality across Chinese counties just before and after the Land Reform, such as the Gini coefficient based on county-level land ownership. We assume that the land ownership among households within each of the five social classes is homogeneous, and we define the county-level Gini as 1 minus twice the area under the (discrete) cumulative distribution function of land ownership. Appendix Figure A.5 illustrates the construction of the Gini coefficients, where we normalize total population and total land ownership to 1 and plot the cumulative land ownership for each social class.

Given that land ownership statistics are only available in aggregate (by category), we make the following adjustment to re-scale the Gini coefficient to [0,1], where 0 refers to an absolutely equal society and 1 refers to the highest possible level of inequality. Specifically, we re-scale the Gini as follows:

$$Gini = \frac{maxCDF - CDF(Land)}{maxCDF - minCDF}$$

where $CDF(Land) = \sum_{Class}(Pop_{Class} \times CumulativeLand_{Class})$ is the cumulative density function of land ownership; $maxCDF$ is the maximum value of CDF (i.e., extreme equality) under discrete distribution of population sub-groups, where everyone owns the same share of land in the society; and $minCDF$ is the minimum value of CDF (i.e., extreme inequality) under discrete distribution, where all land is owned by landlords. The numerator ensures that the Gini coefficients are bounded below by 0, and the denominator scales the Gini coefficients so they are between 0 and 1.

[22] We assume that land ownership for landless hired peasants is zero if the value is missing. Some counties also list other special classes, for example, small land renters and half-landlord rich peasants; the land owned by these special classes, government, and other organizations is not included.

[23] We start with all areas named "counties" in 2000, which ensures that all counties can be readily matched to their contemporary census records, described in the next subsection. Next, we expand our efforts to areas named "cities" and add the data to our sample if the pre-Land Reform ownership distribution is available in the Gazetteers. We regard the two as the same if they are documented under the same historical narratives in the most comprehensive Chinese online encyclopedia, Baidu Baike. Urban districts without documentation about the Land Reform are excluded. Note also that we exclude Tibet, Xinjiang, and Inner Mongolia due to different land policies designed for minority groups.

Figure 2, top panel, maps the Gini coefficients across China; darker shades indicate counties that were more unequal prior to the revolutions. We impute the Gini coefficients of the counties with missing data with prefecture averages.[24] Appendix Figure A.6, top panel, shows the map of the counties with non-missing observations.

3.2 Contemporary wealth distribution at the county level

In order to measure contemporary wealth distribution at the county level, we use a random 0.1% micro sample of the 2000 Population Census. We focus on the year 2000 because it is the last census wave before mass rural to urban migration began in China. Although migration is an important factor in how local inequality evolves, pre-migration measures of local inequality ensure that the pattern of persistence (or lack thereof) in regional wealth inequality is not driven by selective migration across localities. Two migration episodes may drive regional wealth inequality patterns. First, we cannot rule out that emigration at the onset of the Communist and Cultural Revolutions was affected by the pre-revolution land ownership distribution. Emigration was however a marginal phenomenon. The main destinations in the aftermath of the Civil War were Taiwan, with 1.2 million immigrants from mainland China by 1956 (Lin, 2018), and Hong Kong, with 385,000 by 1954 (Peterson, 2012). While large, these numbers accounted but for a small share of the Chinese population. Even if we assume all came from rural areas, these emigrants would account for less than 0.1% of the total rural population in China in 1950. Even if they were all landlords, they would account for less than 1% of the landlord population. Second, some rural to urban migration did occur between the introduction of economic reforms in the late 1970s and 2000. We can however show that rural emigration was still a marginal phenomenon in the 1980s and 1990s. In the 1990 Population Census, 2.21% of agricultural *hukou* holders were living outside their places of registration.[25] In 2000, 5.88% of agricultural *hukou* holders were living outside their counties of registration.[26] The 2000 Census further shows that migration of all household members concerned 5.59% of agricultural *hukou* households and 4.79% of agricultural *hukou* holders.[27]

We use the residential housing area per capita of the household to construct a contemporary inequality measure at the county level. We rely on residential housing area to measure real estate property inequality because this figure is reported for everyone in the population (both home owners and renters), and it is much less likely to suffer from self-reporting bias than savings

[24] Prefectures are the level of administration immediately above counties, and below provinces and the central government. There were about 340 prefectures in China in 2000. When a prefecture-level average cannot be computed, we take the provincial average. Provinces with no data are shown in gray.

[25] Migrants who changed their place of registration are not captured by this measure. This was however extremely rare at the time.

[26] The relevant measure of migration for our analysis is inter-county migration. The 1990 Census however incorporates intra-county mobility, while the 2000 Census does allow us to isolate inter-county movements. Note also that the definition of migrants differs in the two censuses: in 1990, only migrants absent from their places of registration for more than one year were counted; in 2000, the cutoff was reduced to six months.

[27] A household is categorized as agricultural if all its members hold an agricultural *hukou*; it is categorized as a migrant household if all its members are registered in a different county from the county of residence.

and income. Moreover, as long as the same biases exist for all counties, our comparison of the relative differences in inequality across counties is still valid. An important caveat of inequality measures based on housing size is that as rural areas become more urbanized, the upper tail of the population could begin to reside in apartments that are of smaller size but higher value than rural houses. This would underestimate the contemporary local inequality, particularly in more urbanized counties. In Section 5, we take into account the urbanization rate and demonstrate that the results we document are unlikely to be driven by urbanization.

Similar to the land-based Gini coefficients in the 1950s, we construct Gini coefficients based on housing size as one minus twice the area under the cumulative distribution function of the housing size. Specifically, we sort all individuals i by their housing size per capita, compute the cumulative distribution function (CDF) of housing size ownership for each county j, and define the integral of the CDF as the modern housing Gini coefficient as follows:

$$Gini_j(Housing) = 1 - 2\int_{i \in j} CumulativeHousing_i$$

To capture quality differences in real estate, we adjust living size based on reported housing amenities. Specifically, we inflate the living size by 10% for each of the following modern residential characteristics: building has more than one floor, independent kitchen, equipped with gas or electric stove, in-unit tap water available, equipped with hot bath water, or equipped with in-unit bathrooms. The amenity adjustment would take into account structural factors that make smaller living areas more valuable than larger ones (e.g., apartments versus rural houses). Our results are robust to using either amenity adjusted or non-adjusted living size as the basis of the inequality measure.

3.3 Individual outcomes across generations

Finally, the data set we use for individual-level analysis is the baseline wave of the China Family Panel Studies (CFPS), which took place in 2010. CFPS is a large-scale, nationally representative (except for the 6 provinces not covered) panel survey conducted by the Institute of Social Science Survey at Peking University.[28] The 25 provinces of China covered by CFPS represent about 95% of the population in mainland China. Through a multistage probability sampling procedure, CFPS completes interviews with a total of 14,798 sampled households and all individuals living in these households, amounting to 36,000 completed adult observations. For the baseline analyses throughout the paper, we restrict our attention to the subsample of 26,400 adults in rural counties.[29]

Each respondent is asked about the class label assigned to her family at the time of the Com-

[28] Detailed information about the CFPS project can be found at `www.isss.edu.cn/cfps`. The 6 provinces excluded from sampling are Inner Mongolia, Xinjiang, Tibet, Hainan, Ningxia, and Qinghai.

[29] Rural counties are defined based on the administrative classification of the National Bureau of Statistics of China.

munist Revolution. As the class labels have been passed down through generations since the Communist Revolution, this allows us to identify the descendants of the pre-revolution elite — namely, the members of the households of former landlords and rich peasants — without the need to link individuals across three generations. If a member of the younger generation does not know her household class label, we use her father's, since class labels were passed down along patriarchal lines. Overall, 5.27% of rural respondents are identified as pre-revolution elite, which is in line with the figure (6%) often suggested by historical accounts. Intentional misreporting of class labels is unlikely as class background is an important component of family identity, the stigma attached to "bad" class backgrounds was officially abolished in the late 1970s (Lee, 1991; Walder and Hu, 2009), and access to education and high-status occupations in the Reform era is based on merit rather than political criteria (Lu and Treiman, 2008).

Associating each individual with her family class label allows us to compare members of elite versus non-elite households across three generations. The first generation is those born before 1940 — the "grandparents" generation. These individuals grew up *prior to* the Communist and Cultural Revolutions. If they were landlords or rich peasants, their land and other agricultural production assets were expropriated during their adulthood. The second generation is those born between 1940 and 1965 — the "parents" generation. They grew up in the midst or immediate aftermath of the Communist and Cultural Revolutions. If they were from the pre-revolution landlords or rich peasants households, they could not receive wealth inheritance and could not receive formal education, especially at the tertiary level, during the decade of the Cultural Revolution. The third generation is those born between 1965 and 1990 — the "children" generation. These individuals would not be able to receive inheritance from either their parents or grandparents. Nonetheless, the children generation grew up largely during the post-1978 Reform and Opening era, during which ownership of private assets was reintroduced, universities reopened, and a market economy was partially established. Our results are robust to reasonable variations in generation cutoffs.

3.4 Summary statistics

Appendix Table A.1, Panel A, presents summary statistics for counties with complete land ownership data for all five classes (576), counties with incomplete data (296), and counties with no land ownership data (418) along the following dimensions: geographical characteristics (distance to the coast, longitude, latitude), economic development (GDP per capita, average nighttime luminosity, average and median years of education, average educational attainment for cohorts born before 1950),[30] and contemporary housing sizes (median housing area per capita, median amenity-adjusted housing area per capita, Gini coefficient of amenity-adjusted housing area).

[30]Nighttime luminosity as a proxy for regional development level has been widely used: see Alesina et al. (2016) as a recent example and Donaldson and Storeygard (2016) for a review.

Panel B presents the p-values from three balance t-tests to check for potential sample selection based on observable features: between the counties with complete data and those with either incomplete or no data, between the counties with complete and incomplete data, and between the counties with at least some data and those without any data. Among all the 11 variables that we examine, counties with complete historical land ownership data differ from other counties only along median contemporary housing area (both raw and amenity-adjusted) and the average nighttime luminosity. Importantly, contemporary housing inequality is *not* associated with the availability of complete archival records on land ownership inequality prior to the Land Reform. Our baseline results focusing on the counties with sufficient data are robust to various extrapolation exercises where we infer counties with missing data based on nearby counties' land distribution records (see Section 4 for details).

In the baseline specification, we exclude counties with less than 80 households in our random 0.1% extract of the 2000 Census to reduce measurement error in within-county inequality. This leads us to drop 166 counties. We show in Section 4 that our baseline results are robust to alternative sample exclusion criteria. Appendix Table A.2 presents the summary statistics of contemporary county-level outcomes based on the 2000 Census.

Finally, in Table 1, Columns 1 and 2, we present the summary statistics of individual-level outcomes based on the China Family Panel Studies baseline survey. They are organized into four categories: income; educational performance; labor market sector choices; and political and social connections.

4 Successful revolutions in the short run

We first examine whether the Land Reform during the Communist Revolution and the subsequent Cultural Revolution achieved their redistributive and egalitarian goals in the short run.

4.1 Land Reform and land inequality

We begin by comparing the size of land (in acres per capita) owned by households with a "poor peasants" class label relative to that owned by the landlord households, immediately before and after the Land Reform. Figure 1 plots the distribution of this ratio across counties, before (dotted line) and after (solid line) the Land Reform. On the eve of the Land Reform, per capita land holdings in poor peasant households were on average less than 15% of those in the landlord households. The distribution of the ratio shifted substantially to the right after the Land Reform, centered just above 1, indicating that poor peasant and landlord households owned a similar amount of land per capita as a result of the expropriation and redistribution of land, as the *Agrarian Reform Law* prescribed. If anything, the poor peasant households owned slightly more land than the landlord households after the Land Reform. Note that while the cross-county distribution post-Land

Reform is not entirely concentrated around 1, more than 90% of the counties fall within the range 0.5–1.5.

We examine the absolute levels of land ownership more closely, by comparing landlords' average land holdings (total land share divided by total population share of landlords) right before and after the Land Reform. In Appendix Figure A.7, the dotted line plots the distribution of the pre-Land Reform average land holding across counties. The distribution peaks at around 6 acres per capita, and it has a long right tail where landlord households own as much as 25 acres of land per member of the household. The solid line presents the distribution of the average land holding across counties after the Land Reform. The dramatic reduction in the area of land owned by the landlord households is apparent — they got to keep an equal or slightly lower plot of land than the rest of the population. Moreover, the entire distribution is compressed: very little cross-county variation in landlord land ownership remained after the Land Reform. Appendix Figure A.8 plots the distribution of land gained by the households in hired, poor, and middle peasant categories after the Land Reform. One can see that the entire distribution lies above 0 — namely, non-elite households across all counties in China experienced net land gains, on average, after the Land Reform. Appendix Figure A.9 shows that the land gains of the poor households after the Land Reform were larger in more unequal counties prior to the reform.

Next, we examine whether the Land Reform reduced land asset ownership inequality broadly. We compare the county-level Gini coefficients in land ownership, constructed as described in Section 3, before and after the Land Reform. Figure 2, top panel, maps the Gini coefficients across Chinese counties on the eve of the Land Reform, with darker shades indicating higher inequality. We find substantial spatial heterogeneity in inequality. Inequality was particularly high in the Northeast and the South, which is the result of historical and geographic accidents.[31] Figure 2, middle panel, then maps the Gini coefficients immediately after the Land Reform. Compared to the distribution of inequality just a few years before (top panel), the nearly uniform, light color throughout China shows that inequality in land ownership was strikingly reduced. Appendix Figure A.10 plots the distribution of Gini coefficients across counties, before (dotted line) and after (solid line) the Land Reform. One observes that within half a decade, the Land Reform not only sharply reduced the Gini coefficient from on average 0.5 to 0.1, but also substantially compressed its distribution, reducing cross-county variance in land inequality. Correspondingly, Appendix Figure A.11 plots the pre-Land Reform Gini coefficients (x-axis) against the post-Land

[31] Northeastern provinces were closed to Han Chinese settlers until 1860; early movers enjoyed easy access to land, while late movers worked as tenants, creating high inequality in land ownership (Gottschang, 1987; Kung and Li, 2011). Higher inequality in the South than in the North is the result of both historical and geographical differences. Historically, more remote southern provinces were less subject to the Ming and Qing imperial governments' attempts to reduce land concentration, and civil servants had to cooperate with powerful landed gentry to collect taxes (Bernhardt, 1992). Geographically, the South is much more fertile than the North, and production surpluses were high enough to make land rental agreements economically attractive to both landlords and tenants (Kung et al., 2012). High land inequality in sparsely populated Western counties is less easily interpretable because of missing data — see Appendix Figure A.6 for maps without imputations.

Reform Gini coefficients, which allows us to examine the changes in land ownership Gini *within* county. Each dot on Appendix Figure A.11 represents a county, and these dots largely fall along the 45-degree line. In other words, counties that were more unequal in terms of land ownership experienced a larger reduction in Gini coefficients after the Land Reform, which is consistent with the results that the Land Reform effectively made all counties throughout China similarly equal in land ownership.

The residual inequality after the Land Reform as shown in Appendix Figure A.10 and even the increase in Gini coefficient in some counties as shown in Appendix Figure A.11 are *not* due to the limited implementation of land asset equalization. In fact, they are primarily driven by the fact that some counties aggressively deprived landlords of their land, and the poor peasants ended up with slightly more land per capita than landlords. Among 285 counties with complete pre-Reform and post-Reform land distribution statistics, poor peasants own more land per capita than the landlords after the Land Reform in 192 (or 67% of) counties.[32]

The subsequent collectivization movement starting in 1956 further compressed the distribution of asset ownership. The collectivization effort centralized land ownership and rights for agricultural production at the commune level, and this arrangement remained intact until the Household Responsibility System was introduced in 1979, marking the beginning of the Reform and Opening era. As private ownership of most productive assets and land became illegal following the collectivization, we can understand our post-Land Reform measure of inequality as an upper bound on the level of land inequality between the 1950s and the introduction of market-oriented reforms. Formal wealth transmission and inheritance was thus not a viable channel that could contribute to intergenerational transmission and persistence over that period.

Thus, the Land Reform during the Communist Revolution was successful at eradicating inequality in land asset ownership across China in two ways: it homogenized land ownership not only *within* counties — the pre-revolution elite's land assets were largely wiped out and redistributed to the poor, — but also *across* counties — the distribution of land ownership inequality is compressed throughout the country. The remarkable success of the Communist Revolution and its Land Reform in confiscating the wealth of the elite and eliminating wealth inequality should not be taken for granted. Many countries attempted land reforms in recent history, but most failed to achieve wealth confiscation and eradication of wealth inequality even in the short run. Notable examples are the Brazilian Land Reform of the 1930s (Robles and Veltmeyer, 2015), the Chilean Land Reform during the 1960s and 1970s (Bellisario, 2007), the 1960 Indonesian Land Reform (Montgomery and Sugito, 1980; Bazzi et al., 2020), and more recently the Land Reform in Zimbabwe in the early 2000s (Mkodzongi and Lawrence, 2019). In fact, wealth confiscation is one of the most politically challenging tasks to achieve, especially when the wealthy are entrenched with

[32] An alternative explanation for rising inequality is heterogeneous land quality. This is more likely to be the case for mountainous areas, such as Shangluo Prefecture, Shaanxi Province, which stands out at the center of the middle panel of Figure 2.

political power and are able to evade or even revolt. Many factors may have contributed to the success of Chinese Land Reform in the 1950s, such as the strong state capacity and use of violence and coercion during the implementation process.

4.2 Cultural Revolution and education inequality

Next, we examine whether education disruption during the Cultural Revolution affected inequality in educational attainment among cohorts that would have attended secondary or tertiary education at that time.[33] We first document the gap in educational attainment between pre-revolution elite and non-elite individuals for the cohorts not affected by the Cultural Revolution. Figure 3 presents, for each birth cohort, the difference between the share of individuals from pre-revolution elite households who completed at least secondary education (roughly by age 19) and that for individuals from the non-elite households. For most of the cohorts born between 1930 and 1947, which are not directly affected by the Cultural Revolution as they would have graduated from "senior middle school" (the Chinese equivalent of high school) before the disruption of higher education began, we can see that individuals from elite households are about 10 percentage points more likely to have completed at least secondary school education. This is an extremely large difference given the low level of average educational attainment among these cohorts — less than 10 percent of individuals from rural China completed junior secondary school for most of these early cohorts.

The advantage in educational attainment among members of the elite households sharply decreased starting from the 1947 cohort, as marked by the left edge of the shaded rectangle in Figure 3. Regular education programs of universities and many high schools halted, and meritocratic admissions — into the few education programs still operating during the Cultural Revolution — were abolished. Junior secondary school (reduced from three to two years) was transformed to accommodate children's participation in farm work and household chores, e.g., by allowing for lower attendance, shorter school days, and even bringing younger siblings to class (Parish and Whyte, 1978; Pepper, 1978). The positive gap between the share of individuals from pre-revolution elite households who completed secondary or above education and that of individuals from the non-elite households rapidly shrank among the cohorts directly affected by the decade of the Cultural Revolution. In fact, among the cohorts born after 1955, who would be finishing primary school after the onset of the Cultural Revolution, the pre-revolution elite are worse off in terms of educational attainment than their counterparts in non-elite households. This is due to two reasons: first, expansion of basic education disproportionately benefited individuals from non-elite households during this period; and second, the pre-revolution elite experienced unfavorable treatment in access to formal education, as people with landlord or rich peasant class labels were often

[33] The education system in China before the Cultural Revolution consisted of six years of primary education (starting at age 6 or 7) and six years of secondary education (or "middle school," split into "junior" and "senior"). During the Cultural Revolution, primary and secondary schools were both reduced to five years (Pepper, 1978).

barred from entering schools.[34]

Combined with the previous evidence on physical assets, these results show that the two factors highlighted by economists as central to production activities, namely, physical capital and formal human capital (via schooling), could not be passed down through the Communist and Cultural Revolutions.

4.3 The life of the "parents"

Finally, we examine the outcomes of the "parents" generation, beyond asset inheritance (which was nonexistent) and educational attainment. Table 1, Columns 3 and 4 compare individuals in the parents generation from elite households with their peers from non-elite households. We control for cohort and county of residence fixed effects, hence exploring only within cohort within county differences across elite and non-elite descendants. Column 5 presents the overall mean in the corresponding variables among the parents generation as a whole.

Panel A presents income measured in 2010. We find that the individuals of the parents generation from pre-revolution elite households earn a significantly lower labor income than their peers without an elite background. The annual labor income gap between individuals from elite and non-elite households is approximately 18% of the average income in the parents generation. Panel B replicates results on educational attainment as shown in the previous subsection. The parents generation of the pre-revolution elite no longer enjoy an advantage in attaining formal education, and if anything, they become less likely to complete secondary or tertiary education than their peers from non-elite households. Interestingly, there are no significant differences between the parents generation of the elite and non-elite households in their math skills, tested in a standardized test in 2010. That suggests that despite the lack of formal schooling, elite households may supplement other informal forms of human capital accumulation such as home schools. Panel C further examines labor market choices. Consistent with the fact that pre-revolution elite individuals from the parents generation were largely excluded from public sector jobs, we find that the parents generation of the pre-revolution elite are more likely to be self-employed, less likely to work in the public sector such as state-owned enterprises, and more likely to hold a low-prestige occupation.

Although it is challenging to get a comprehensive and systematic measure of how the parents generation of the pre-revolution elite fared during and in the immediate aftermath of the revolutions, one can get a glimpse of their experiences during the Great Chinese Famine (1959–1961). The Famine was one of the worst peacetime disasters in modern history, largely caused by misallocation of food (Meng et al., 2015). We find that individuals among the parents generation of the pre-revolution elite were *more* likely to experience hunger during the Famine (Table 1, Panel

[34]Formal education during the Cultural Revolution specifically discriminated against the "Black Fives," a new category coined during that decade. The "Black Fives" included: landlords, rich peasants, counter-revolutionaries, anti-socialists, and rightists.

D), despite the fact that their parents were landlords or rich peasants with ample access to agricultural products merely a decade before the Famine. They were also significantly less likely to be members of the Communist Party, an indicator of formal political connections and broad social status after the revolutions, especially in rural China, and a key prerequisite for access to state redistributive resources (Bian, 2002). While the pre-revolution elite among the grandparents generation enjoyed a substantial advantage and likely significant local power, the parents generation did not — anyone with tangible political and social connections, hence with preferential access to scarce resources (such as food during the Communist Revolution and the collectivization period) would have taken advantage of their connections to minimize the impact of the Famine on herself and her family.

Taken together, these results show that among the parents generation, members of the pre-revolution elite households no longer exhibited an "elite premium" in most of the dimensions that we can measure.

5 The life of the "children"

The Land Reform (during the Communist Revolution) and the Cultural Revolution were remarkably successful in the short run — essentially eradicating inequality in land ownership and educational attainment, and directly affecting the lives of the parents generation. In this section, we examine whether the revolutions had a persistent impact. We first focus on the county as a whole in 2000, and then we zoom in on individual outcomes among the children generation.

5.1 County-level persistence

In order to examine the persistence (or lack thereof) in inequality at the aggregate level, we ask whether contemporary inequality (measured with our housing proxy) in a given county is associated with land ownership inequality prior to the Communist Revolution.

The results in Section 4 show that the land ownership inequality within counties soon after the Land Reform was no longer associated with the land inequality just prior to the Reform. In other words, the Land Reform "leveled the playing field." If (real estate) inequality in 2000 — i.e., after the Reform and Opening era starting in 1978 had reintroduced private asset accumulation — remains not associated with the land inequality prior to the Land Reform, this suggests that the Land Reform has had long-term effects on inequality across counties. If there is a systematic association between pre-Land Reform land inequality in late 1940s and real estate inequality in 2000, then it is evidence of either a resurgence or a reversal of the pre-revolution inequality patterns. Note that within-county inequality in the 1950s is calculated based on land assets, and that in 2000 is calculated based on primary housing sizes. While different bases of the inequality measures could mechanically affect the overall level of inequality due to measurement, such differences would not necessarily affect the level of inequality relative to other counties in the country. Urbanization

could affect the association between land assets and housing size, and we explicitly examine the role of urbanization in the section below.

Figure 2, bottom panel, maps the real estate housing Gini coefficients in 2000 across counties. Relative to the land ownership inequality just after the Land Reform (middle panel), inequality had begun to re-emerge throughout China by 2000. Moreover, regions that were more unequal prior to the Land Reform (top panel), such as the northeastern provinces, became relatively more equal in 2000; we can also note that inequality seems less spatially correlated in 2000, which may be partly due to the removal of historical determinants of land inequality prior to the Land Reform. In Table 2, we regress the real estate housing Gini coefficients in 2000 at the county level on the corresponding land ownership Gini coefficients just prior to the Land Reform. We include province fixed effects throughout. Column 1 presents the baseline coefficient estimates. We observe a strong and sizable *negative* relationship between the pre-Land Reform inequality and contemporary inequality (measured in 2000). In other words, the Land Reform and Cultural Revolution were successful in the long run at the county level: past inequalities were not only suppressed; the Land Reform reversed the pattern across China and made historically more unequal places relatively more equal today. Note that since this analysis is conducted at the county level, the reversal we document does not suggest that counties more unequal prior to the Land Reform become more equal in 2000 in *absolute* terms, but rather, they become more equal *relative* to other counties.

This reversal pattern is robust to taking into account of a variety of factors that could affect inequality. In fact, time invariant factors that would be associated with inequality within county (e.g., geographic or structural reasons that make a county inherently more unequal than others) could not drive this reversal, unless the revolutions triggered a different set of regional characteristics to reshape inequality. Table 2, Columns 2–5 test the robustness of the reversal finding. Column 2 controls for the contemporary county development level proxied by nighttime luminosity in 2000; Column 3 controls for the historical county development level, proxied by average educational attainment level in 1950; Column 4 controls for a variety of geographic attributes that may be associated with either development or within-county inequality, such as land ruggedness and distance to resources;[35] and finally, Column 5 controls for county-level access to external and internal markets.[36] The negative relationship that we document in Column 1 remains largely unchanged. It is also robust to excluding coastal regions where rich households may have been more likely to emigrate prior to the revolutions[37] in order to evade confiscation (Column 6) — such

[35]The geographical controls include distances (km) to the shore, fast-speed road network, and major rivers, as well as the means and standard deviations of elevation and slope.

[36]External (resp., internal) market access is defined as the weighted sum of the populations (from the 1953 Census) in coastal (resp., non-coastal) counties. As is standard in the economic geography literature since Harris (1954), the weights are the inverse of the exponential of distance, measured in km. Coastal counties are defined as counties in provinces with access to the sea; the results are robust to defining coastal counties more narrowly as counties with direct sea access.

[37]See Lin (2018) and Yap (2018) for a breakdown by province of origin of immigrants from the mainland in the

emigration of the wealthy could generate a reversal in inequality. Moreover, this negative relationship is robust to different weights on the amenities or excluding them all together (Appendix Table A.3), to alternative sampling criteria (Appendix Table A.4), and to extrapolating missing observations for county inequality (Appendix Table A.5).[38] Finally, urbanization may induce households at the top of the income and wealth distribution to move to urban apartments that have smaller sizes than rural houses, and lead us to underestimate contemporary inequality and hence overestimate the inequality reversal over time. However, we find that the reversal in county-level inequality is remarkably robust to controlling for the urbanization rate in 2000 (proxied by the share of population in a given locality who hold an urban household registration, or *hukou*), as shown in Appendix Table A.6.

Much of the movement toward equality comes from the compression of the difference between the above-median and median households. Figure 4 decomposes the inequality reversal over time by different parts of the distribution.[39] We estimate the correlation coefficients between the pre-Land Reform land Gini coefficient and the corresponding county's 2000 housing inequality. Instead of the overall Gini coefficient of 2000 housing inequality, we construct a separate inequality measure for each decile as the ratio between the X^{th} and 50^{th} percentiles of the housing size in 2000 in a given county, where X ranges from 10 to 90. We trace out X along the x-axis, and the corresponding correlation coefficient estimates on the y-axis. We reverse the ratios if $X < 50$, so that one can interpret negative coefficients across the entire spectrum of X as indicating a reversal between historical and contemporary inequality. The estimated coefficients for percentiles below the median are in general indistinguishable from zero, suggesting that the reversal in equality did not occur among the lower half of the distribution in terms of housing size. This does not indicate a resurgence of historical inequality either — coefficient estimates close to zero suggest that the reshuffling of historical inequality is fairly persistent among below-median households. However, one begins to observe an increasingly negative coefficient as X increases beyond 50.

In Appendix Table A.8, we further investigate the underpinnings of the reversal in county-level inequality. We interact the pre-revolution land Gini coefficient with various time-invariant county characteristics that we expect, based on the literature, to have affected income and wealth distributions differently before and after the Mao era. This heterogeneity analysis shows that the reversal pattern is observed in counties that have better access to international markets and in counties that received massive industrial investments during the 1950s (Heblich et al., 2019). It is particularly prevalent in the first set of counties, which were the primary beneficiaries of the export-driven economic growth that took place after the Reform and Opening, and likely saw a

Taiwanese 1956 Population Census.

[38]The imputation strategy used in Table A.5 consists of replacing missing values with the prefecture average (or the province average if no county in a prefecture has valid inequality data). The results are robust to an alternative imputation strategy, where we replace missing values with the average within a 2×2-degree rectangle centered in the county with the missing inequality data.

[39]These results are presented in regression form in Appendix Table A.7; the pattern that we document here is robust to various alternative sampling criteria, as shown in Appendix Figure A.12.

bigger rise in the middle and upper middle classes.

Within-county education inequality exhibits a different pattern. We find that rather than a reversal as we showed for assets, educational inequality within county bounced back among the generation of individuals who attended school after the end of the Communist and Cultural Revolutions. In Table 4, we examine the relationship between pre-revolution inequality and subsequent inequality in educational attainment within a given county. In the baseline specification, we measure county-level education inequality as the difference in years of education between the top 25^{th} percentile and the bottom 25^{th} percentile in the county. We construct such a measure for each of the three generations of interest — the grandparents, parents, and children, shown in Panels A, B, and C, respectively. The pre-revolution inequality in land is positively associated with inequality in educational attainment among the grandparents generation, who would have completed most if not all of their schooling prior to the start of the Communist Revolution. In other words, county-level inequality prior to the revolution is unidimensional — places that were more unequal in terms of land ownership tend to be also more unequal in terms of educational attainment. The positive association between historical inequality and educational attainment inequality then disappears among the parents generation and re-emerges among the children generation. This suggests that while formal education was severely disrupted among the parents' generation, the attitudes that value education and the accompanying informal human capital accumulation may have persisted.

Finally, the Communist and Cultural Revolutions may have had a persistent impact by altering preferences. We investigate whether the revolutions affected the overall preference toward inequality and redistribution in a given county. Specifically, we examine the county-level average answer to the following survey question related to redistribution and inequality, as elicited in the CFPS in 2010:

To what extent do you agree with the following statement:
For the economy to thrive, one needs to enlarge income inequality in the population.

1 = extremely disagree
5 = extremely agree

In Appendix Table A.9, we look at the relationship between pre-revolution land ownership inequality (measured by the Gini coefficient) and the contemporary average attitude toward inequality in the corresponding county. One sees that counties that were more unequal prior to the Land Reform display substantially lower tolerance toward inequality. This association is robust even controlling for cohort and income at the time of the survey, as shown in Columns 2 and 3. In other words, the Communist Revolution and the Cultural Revolution appear to have generated a lasting impact across Chinese rural counties — rural counties that were more unequal prior to the

revolutions have become collectively less tolerant of inequality.

5.2 Children generation of the pre-revolution elite

We now investigate the persistence of inequality at the individual level, comparing the outcomes of people with and without an elite background among the third, "children" generation.[40]

Income and labor market outcomes

We first compare contemporary labor income in the children generation for individuals with and without an elite background.

Table 1, Panel A, Columns 6–7 present the results from the regression of total annual labor income on an indicator of whether one's grandparents were pre-revolution landlords or rich peasants. The specification controls for cohort fixed effects and county of residence fixed effects, absorbing cross-sectional differences in wage and labor market conditions across counties. We restrict the sample to individuals living in rural locations born between 1966 and 1990, namely, the children generation. We have 9,844 survey respondents in this group. Income is measured in 2010, thus it keeps the macroeconomic conditions at the time of measurement fixed for all subjects, but it does not capture the life cycle variation in an individual's income trajectory.

"Children" from pre-revolution elite households earn on average RMB 1,912 more per year in labor income in 2010 than their counterparts from non-elite households. Relative to the average wage, this amounts to an annual income gap of approximately 16%. In other words, on the one hand, we observe a reversal and compression in inequality *across* counties: counties that were more unequal prior to the Land Reform become relatively more equal and compressed in assets distribution. On the other hand, *within* county inequality in contemporary China is at least partly, and perhaps surprisingly, still due to the divergent socioeconomic outcomes between the *pre-revolution* elite and non-elite households in the children generation.[41]

Such an annual income gap is substantial in magnitude. A first benchmark is the gender income gap in China. Based on the same national survey data, Heshmati and Su (2017) find a gender income gap of 21%. The elite grandparents premium is thus more than four fifths of the gender gap in China. A second benchmark is the rural-urban income gap within China. In 2010, the time when income among the children generation was measured, an average urban *hukou* holder earned a 61% higher income than their peers with rural *hukou* status. Thus, the magnitude of the elite premium that we identify is about a third of the rural-urban gap one observes in China. A

[40] Note that county-level reversal in inequality does not necessarily imply that the individuals among the children generation of the pre-revolution elite are worse off than their peers from non-elite households. We discuss the link between county- and individual-level patterns below.

[41] Appendix Figure A.13 illustrates how seemingly opposite patterns at the county and individual levels could coexist. The reversal of within county inequality captures the relative distribution of inequality patterns *across* counties throughout China. The pattern characterizing the pre-revolution elite over time largely occurs *within* counties.

third benchmark is the racial income gap in the United States. Based on the American Community Survey data used in Bayer and Charles (2018), we find that the annual earnings gap between black and white males was 18% of average earnings in 2007 and 24% in 2014. This suggests that the income gap between the descendants of landlords and peasants in China amounts to at least 70% of the racial gap in the United States.[42]

Yet another way to benchmark the income gap is to calculate the transition probability — the chance that one stays in the top decile in terms of income if one's grandparents were in the top decile. A three-generation transition matrix is rarely estimated in other contexts due to data limitations; we thus extrapolate from the two-generation transition matrix, assuming the same transition probability between grandparents and parents as between parents and children.[43] Appendix A describes the detailed procedure of recovering the transition matrix from regression coefficients. Since the pre-revolution landlord elite were approximately in the top decile of the population, our estimated income gap implies that their grandchildren had a 14.5% chance of staying in the top decile. This is even higher than the persistence rate of top decile in the U.S. — 14.1% (Chetty et al., 2014), and much higher than that in Canada — 11.1% (Corak and Heisz, 1998). The large annual income gap is particularly striking, given the similarity among the parents of these individuals as a result of the Communist and Cultural Revolutions. Thus, the two major revolutions with the explicit goals of eliminating class privileges and removing inequality did not manage to increase social mobility substantially above what is observed in these two exemplifying capitalist economies, with no revolutions.

The children generation of the pre-revolution elite are more pro-market and entrepreneurial, as reflected by their employment sectors. Table 1, Panel C, presents the results of a regression of various employment statuses on the elite household indicator. Employment status is measured by: *(i)* an indicator for self-employment (e.g., small enterprise owner, entrepreneurs); *(ii)* an indicator for public sector employment (equal to 1 if employed by a state-owned enterprise and 0 otherwise); and *(iii)* the ISEI score of the particular job, which ranks occupation categories so as to maximize the role of occupation as an intervening variable between education and income (Ganzeboom et al., 1992).[44] We find that individuals of the children generation with a pre-revolution elite back-

[42] A large number of contributions in sociology have highlighted the persistent effect on economic outcomes of belonging to a household with a revolutionary cadre or martyr (e.g. Rosen, 1982; Unger, 1982; Andreas, 2002; Treiman and Walder, 2019). We can compare our pre-revolution elite premium to this "de facto Party patronage" (Treiman and Walder, 2019), using as a proxy a dummy equal to one for anybody in a household with at least one Chinese Communist Party member in the grandparents or parents generation (about 6% of the children generation fall into that category). We find that the pre-revolution elite effect is about 70% of the "revolutionary" elite effect (RMB 2,219.6, significant at the 1% level).

[43] This implicitly assumes that the transition from the 1st to the 2nd generation is i.i.d with respect to the transition from the 2nd to the 3rd generation, which could over-estimate the transition probability if there exists persistence within the household.

[44] We observe substantial intergenerational occupation upgrading from agriculture to non-agricultural sectors among those from the elite households. Appendix Table A.10 shows that the children generation from pre-revolution elite households are about 60% *more* likely to hold non-agricultural occupation than their peers from non-elite households, if their parents worked in the agricultural sector.

ground are about 5% more likely to be self-employed and in general hold occupations that have significantly higher occupational status as measured by the ISEI score.[45] Moreover, we observe that the children generation from elite households are slightly less likely to be employed in the public sector, though the difference is not statistically significant.

In Table 3, we decompose the identified income gap into between and within public vs. private sector differences. Column 1 replicates the baseline specification, showing an average annual income gap of RMB 1,911.5. This specification already takes into account the average income differences across counties, as county fixed effects are included. Column 2 additionally controls for public and private sector fixed effects, taking out the cross-sector income differences across China. The elite versus non-elite income gap remains largely unchanged, which implies that the primary sources of the income gap are *within* sector rather than between. In Column 3, we control for province-specific public-private income gaps to account for the provincial heterogeneity in cross-sectoral income differences. Finally, in Column 4, we control for a migrant indicator variable, where migrants are defined as those who currently reside in counties different from their birth counties. The estimated difference in the income gap between elite and non-elite children remains largely unchanged throughout Columns 1 to 4, at 16–17%. Thus, even if we take into account regional differences in sectoral performance and the differential labor market conditions experienced by migrant workers, the gap in labor market performance between elite and non-elite children remains, suggesting that it is primarily due to income differences *within* employment sectors.

Finally, we examine whether the income gap among the children generation of elite and non-elite backgrounds systematically differs across cohorts. Figure 5 traces the income gap (a positive number indicating higher income among elite household members compared to their peers from non-elite households) for birth cohorts starting in 1930. The income gap between the descendants of elite and non-elite households steadily increases as the cohorts become younger, in particular among those born after the 1960s, who entered the labor market in the Reform and Opening era (from 1978 onwards). This pattern suggests that the higher the proportion of one's professional career spent in the Reform and Opening era, when market forces began to function again, the bigger the role played by pre-revolution family background in predicting contemporary income and labor market performance. Household characteristics that could be relevant for the market emerge and help individuals accumulate higher gains from the labor market, as soon as the institutional and socioeconomic environment begins to (re)align with these characteristics.

[45]This relates to recent evidence that parental background is key in explaining business ownership in China, the children of entrepreneurs being more likely to become entrepreneurs themselves (Jia et al., 2020). To the extent that self-employed small business in rural China often requires access to capital via social network and informal lending (e.g. Zhang and Loubere, 2013), this also suggests that individuals among the children generation of the pre-revolution elite have stronger social ties and are able to excel at network-intensive career paths. We investigate the importance of social networks for the children generation of pre-revolution elite households at the end of Section 5.

Educational attainment

The right section of Figure 3 traces the difference in the proportion of individuals who have completed at least secondary education between individuals from pre-revolution elite households and those from non-elite households, up to the cohort born in 1990. The figure exhibits a U-shape pattern. As we document in the previous section, the Cultural Revolution deprived the elite and their descendants of education opportunities, especially for those who entered schooling age at the beginning of the Cultural Revolution. For the cohorts directly affected by the Cultural Revolution, the parents generation of the pre-revolution elite experienced a sharp decline in their relative access to secondary and tertiary education. In contrast, among the cohorts that began secondary and tertiary education after the normalization of education (i.e., those born after 1961), the proportion of individuals from pre-revolution elite households who completed at least secondary school immediately bounces back and remains much higher than that of their counterparts in non-elite households. In other words, among the children generation, those from pre-revolution elite families completed significantly more years of schooling, despite the lack of differences among the parents generation.

We then analyze this pattern more rigorously in regressions, where we exploit across households, within county, and within cohort variation. As shown in Table 1, Panel B, individuals from pre-revolution elite households complete on average 0.75 years (or 11%) more schooling in the children generation. They are much more likely to complete secondary school and higher education than their counterparts from non-elite households. The increased schooling also reflects differences in tangible human capital accumulation, as measured by math skills in a standardized test implemented in a 2010 CFPS module. "Children" from pre-revolution elite households performed significantly and substantially better in math than their peers from non-elite households. Given that just one generation ago, the pre-revolution elite did not enjoy any advantage in — if anything, were discriminated against in their access to — formal schooling, the rapid and systematic rebound of the children generation is particularly striking.

Values and attitudes

We now examine values and attitudes across several dimensions that have been broadly identified as productive cultural traits and attitudes. We focus on the following survey questions from the CFPS, answers to which are generally predictive of income and wealth (Alesina and Giuliano, 2015):

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1 How important is being rich to you?
(1 = not important at all; 5 = extremely important)

2 Do you agree that for the economy to thrive, one needs to enlarge income inequality in the population?

(1 = do not agree at all; 5 = completely agree)

3 Do you agree that fair competition is essential to harmonious interpersonal relationships in the society?
(1 = do not agree at all; 5 = completely agree)

4 Do you agree that the most important factor that determines someone's success is how hard she works?
(1 = do not agree at all; 5 = completely agree)

In Table 5, Columns 1 and 4–6, we examine whether in the children generation individuals from the pre-revolution elite hold different attitudes along these dimensions, compared with their peers from non-elite households. Similar to the previous specifications, we control for birth cohort and county of residence fixed effects. Compared with their counterparts from non-elite households, individuals with an elite background are significantly more likely to: *(i)* believe that hard work is critical to success; *(ii)* consider being rich as an important aspect of life; *(iii)* believe that inequality is desirable in the society in order to incentivize growth; and *(iv)* consider competition essential to maintain social cohesion.

The differences in these attitudes are consistent with actual differences in behavior between the pre-revolution elite and the non-elite. We investigate the hours spent on work during weekdays and the hours spent on leisure on weekends, self-reported in the CFPS. In Table 5, Columns 2 and 3, we present estimates from regressing these measures of time allocation between work and leisure on whether the children generation is from pre-revolution elite or non-elite households (again controlling for birth cohort and county of residence fixed effects). Indeed, behavior is consistent with beliefs: individuals in the children generation with an elite background spend significantly more hours working on weekdays and fewer hours on leisure (hence more hours at work) on weekends, in line with their expressed work ethics. This difference holds even accounting for province, county, and public-private sector fixed effects. The difference in hours worked is substantial — around 10% longer work hours on workdays, amounting to 235 more hours at work (and hence less leisure) each year.

Co-residence with the parents generation is an important factor to account for the attitudinal differences between the pre-revolution elite and non-elite among the children generation. Co-residence with parents is (partly) endogenous: perhaps children who choose to co-live with their parents share similar values with them to begin with, which would bias the estimate of cultural transmission upward. However, we also investigate co-residence with parents (or lack thereof) depending on whether the parents died prematurely, which can be considered exogenous.[46] In Table 6, we examine the extent to which the pattern of elite differences varies with the co-residence

[46]The vast majority of the cases of co-residence with parents that we observe are with biological parents, as the divorce rate in China is relatively low — less than 2 per 1,000 inhabitants at the time of the 2010 CFPS. Nonetheless, one may co-reside with extended family members, especially when not residing with parents, and we do not directly observe such behavior.

between the parents and children generations. Column 1 first replicates the baseline specification of the previous results on elite vs. non-elite differences in work ethics. Column 2 focuses on the sub-group of individuals in the children generation who co-live with their parents; Column 3 focuses on those who do not co-live with their parents despite their parents being still alive; and finally, Column 4 focuses on the sub-group whose parents are no longer alive. One can see that the sub-group of individuals in the children generation who co-live with their parents exhibits the largest elite vs. non-elite attitudinal differences, and the gap essentially vanishes among those whose parents have already passed away. While co-residence with parents could be driven by the alignment of fundamental attitudes between the two generations, the inability to co-reside due to the parents' premature death makes such sorting less of a concern. Overall, the evidence here is consistent with the interpretation that vertical transmission, of which co-residence and spending a significant amount of time together are a pre-requisite, plays an important role. Moreover, similar differences in attitudes are observed even among individuals who were still adolescents in 2010, who have not yet engaged in the labor market and experienced actual income differences themselves.[47] In other words, the attitudinal differences observed between the members of pre-revolution elite and non-elite households are likely to have emerged as a result of intrahousehold transmission, rather than merely reflecting labor market outcome differences.

Values need not be explicitly expressed within families to be transmitted to children. In fact, expression of pro-market and pro-work ethics attitudes was strongly suppressed and stigmatized during the Cultural Revolution, as they were incompatible with the Communist agenda. Appendix Table A.11, Panel B, presents the differences in expressed attitudes on work ethics and work hours between members of elite and non-elite households, in the parents generation (Panel A replicates those for the children generation, as shown in previous tables). Interestingly, while the children and parents generations exhibit a very similar pattern in actual hours worked — much higher for members of pre-revolution elite households in both generations, — we do not observe such a difference in self-reported work-related attitudes among individuals in the parents generation. If we were to infer from actual behavior private convictions regarding work ethics and pro-market attitude, then these "private" values, attitudes, and convictions may not have changed among the parents generation during the Cultural Revolution and were passed down to the children generation. The picture is rather different when it comes to willingness to express pro-market and pro-work ethics. The stigma attached to these beliefs during the revolutions may have made the parents generation reticent, an effect that persists to this day. Nonetheless, what is remarkable is that despite such a stigmatization, "private" values, attitudes, and convictions may remain unchanged and their transmission across generations is resilient. Transmission of stigmatized private values and attitudes would particularly require close interactions and substantial

[47] Respondents born between 1991 and 1995 are 42% more likely to state that hard work is important for success if their ancestors were landlords or rich peasants before the revolution; this effect is statistically significant at the 1% level (number of observations = 1,099).

time spent together between the generations, which is consistent with the co-residence patterns that we examined above.

Finally, we examine to what extent differences in attitudes and educational attainments could account for the large income gaps that we document between the children generation of elite and non-elite households. In Table 3, Columns 5–7, we compare the annual labor income between individuals in the children generation of the pre-revolution elite and their peers from non-elite households. In addition to the baseline controls of birth cohort and county of residence fixed effects (shown in Column 1), we control for educational attainment (Column 5), the cultural traits and attitudes we examined above (Column 6), and both sets of variables (Column 7). The elite vs. non-elite income gap, RMB 1,912/year in the baseline specification, is dramatically reduced when educational attainment (Column 5) or values (Column 6) are controlled for: although the grandchildren of the pre-revolution elite still earn more than their peers without an elite background, the effect is no longer statistically significant at conventional levels and drops by 85% and 75%, respectively. Once differences in cultural traits, attitudes, and educational attainment are taken into account (Column 7), the elite effect virtually disappears: it is reduced by 98% (to RMB 45/year). One ought to be cautious in interpreting results from this exercise, as the covariance structure of the regressors could affect the coefficient estimates, but the pattern suggests that the transmission of a particular set of values and attitudes such as work ethics and educational attainment is an important channel through which the income advantage of the pre-revolution elite emerges again in the children generation.

Family networks

We last examine a complementary source of persistence: the elite households' social network, in particular, that is based on the nuclear and extended families. We find that the rebound of income among the children generation is almost exclusively concentrated among those who reside in villages that have significant clan presence (see Appendix Table A.12), the backbone of the family-based social network structure that sustains cooperation and public goods provision in rural China (Greif and Tabellini, 2017). Individuals in the children generation of the pre-revolution elites are more likely to co-reside with their parents than their peers in non-elite households, and as a result, forming households with more generations. In addition, members of pre-revolution elite households are substantially more likely to: *(i)* visit relatives during the annual Spring Festival, the most important occasion for family gathering and reunion throughout China (see Appendix Table A.13); and *(ii)* provide their relatives and extended family members with, or receive from them, financial help (see Appendix Table A.14). Interestingly, we do not observe substantial differences in financial transfers exchanged with non-relatives, consistent with the fact that the social networks are largely coextensive with the extended family and strong ties are more usually leveraged than weak ties in China (Bian, 1997). Taken together, these patterns suggest that while the Land Reform and Cultural Revolution eradicated the elite class's physical assets and

opportunities to accumulate formal human capital — making the family networks of the parents generation of elite households less economically valuable, — to the extent that the revolutions did not induce mass killing or emigration, the basic social fabrics within elite families (both nuclear and extended ones) survived. Such family-based networks may contribute to the persistence of the pre-revolution elite.

6 Discussion

6.1 Pre-revolution elites: landlords vs. rich peasants

While the revolutions divided the Chinese rural population into two distinct groups (pre-revolution elite and non-elite), different sub-groups may emerge as the new post-revolution upper and upper-middle classes. Specifically, one may be concerned that, although Chinese landlords resembled well-off farmers rather than rentiers (see Section 2.1), our results might be exclusively driven by landlord households; this would indeed invalidate our interpretation of the rebound of elite households as evidence of the transmission of work ethics.

We examine whether the post-revolution rebound of elite advantage is primarily driven by the descendants of landlords (who were, if anything, more likely to be rentiers) rather than those of rich peasants (more likely to be a working elite). In Appendix Table A.15, we show that, compared to their peers without an elite background, individuals whose grandparents belonged to the pre-revolution elite earn significantly higher incomes, whether they originate from landlord or rich peasant households. The income gap among the children generation between the descendants of landlords and members of non-elite households is not statistically significantly different from that between the descendants of rich peasants and non-elite households. This corroborates the evidence presented in Section 5 showing the role of work ethics in the long-run rebound of the pre-revolution elite.

6.2 Inequality prior to the revolutions: other measures

The main analysis that we present in the paper takes land inequality in the late 1940s, just before the Land Reform, as the starting point. To gauge whether land inequality on the eve of the Land Reform reflects the medium-run distribution of land in rural China, we complement our baseline analysis with a data source on land distribution that is independent from the County Gazetteers. Specifically, we measure the land ownership distribution in the 1930s, the earliest period for which data on land distribution across Chinese counties exist. The source is *Land Utilization in China: A Study of 16,786 Farmers in 168 Localities, and 38,256 Farm Families in Twenty Two Provinces in China, 1929–1933*, compiled by John L. Buck in 1937. Buck, the head of the Department of Agricultural Economics at the University of Nanking, sent his students to different villages across China to survey land utilization. We aggregate these reports from villages to the county level, which cov-

ers 142 counties. The counties are not representative of China, but these reports are the most comprehensive data available on China's agricultural sector prior to 1949.

We first examine whether the land distribution in the 1930s is predictive of that in the late 1940s just before the Land Reform. Overall, 52 counties can be matched to the pre-Land Reform Gazetteer data. As shown in Appendix Table A.16, Panel A, the share of land area owned by landlords in the 1930s is positively, significantly, and robustly correlated with the corresponding measures in the late 1940s. In other words, the land distribution on the eve of the Land Reform reflects an agricultural landscape in China that had prevailed for at least several decades, and potentially for even longer periods.

We then examine whether the pattern of reversal in county-level land inequality in 2000 is robust to focusing on a longer time horizon — from the 1930s to 2000. We match 123 counties in the 1930s reports to the 2000 Census. In Appendix Table A.16, Panel B, we predict real estate inequality in 2000 with average land rent in the 1930s. The average rent in the early 1930s is significantly negatively correlated with housing inequality measured in 2000. This, again, suggests that the Land Reform and Communist Revolution is a shock to China's land distribution, which has been otherwise fairly slow-moving.

6.3 Alternative channels of persistence

Intergenerational value transmission may not be the only reason for persistence. There could be others. First, the pre-revolution elite's comeback could simply reflect the failure of the Communist and Cultural Revolutions to thoroughly deprive elite households of their wealth and access to higher education. During the Cultural Revolution the elite were completely barred from post-secondary education, since a "good" class label was a pre-requisite for admission into any school, and it was extremely dangerous to forge one. Hidden wealth, on the other hand, is by definition difficult to measure and could potentially be relevant. Wealth could be hidden if the Land Reform did not take away all the land from the landlord and rich peasant households beyond the subsistence level, and these families could leave behind other agricultural productive assets. This is unlikely not only because of the evidence we present in Section 4, but also due to the collectivization movement in 1952–1957 that completely eliminated private property rights (both usage and transfer rights) to any land and production assets soon after the Land Reform. To the extent that one could try to hide wealth and assets from being confiscated, it is primarily in the form of slaughtering cattle for one-off private consumption, and the estimated scale of such a behavior is rather low (Chen and Lan, 2017). A more plausible channel of avoiding confiscation during the two Revolutions was to transfer wealth overseas, mainly to Hong Kong and Taiwan. This typically involved individuals physically migrating along with their assets, since private savings and overseas transfers were shut off until the late Reform and Opening period. While we think this could capture the behavior of the top wealthy families in major urban centers, in particular Shanghai, this was very rare amongst the rural elite. Nevertheless, members of the elite households may

receive remittances from émigré relatives after overseas transfers are resumed.[48] However, we do not find evidence that the magnitude of such remittances is substantial among the rural households we study, and we find no differential access to remittances in pre-revolution elite households.[49] Finally, a small fraction of the urban elite received a portion of their pre-revolution real estate properties back in the early 1990s. Again, no confiscated assets were returned in rural areas, and hence this is unlikely to drive the persistence among the rural elite that we document. A systematic examination of the records in the *County Gazetteers* suggests that while the ownership of the (previously confiscated) agricultural production assets such as semi-mechanized farming tools have been re-allocated from the collectives to households since 1981, they were not returned to their original owners if those assets were taken during the Land Reform. Agricultural land and tools were instead typically allocated through lotteries or auctioned off (Unger, 1985).

Second, the resurgence of the pre-revolution elite may be driven by differential policies that favor this group. Any such policies, if they exist, would have to be recent because the pre-revolution elite were in fact discriminated against in most public policies throughout the revolution period and even during the first decade of the Reform and Opening era. Our reading of contemporary Chinese policies suggests that there were no systematic policies that explicitly and favorably targeted pre-revolution elite. One subtle form of such favorable policies could be that the pre-revolution elite have an easier time obtaining business licenses, although in those cases one cannot determine whether it is coming from the demand side (e.g., local authorities prefer to grant licenses to individuals from pre-revolution elite households, knowing that they cannot access public sector jobs) or the supply side (e.g., the pre-revolution elite possess better know-how to navigate the bureaucratic structure). The latter would be consistent with our broad definition of cultural traits and characteristics that could be passed down from one generation to the next.

Third, one may be concerned that the pattern of persistence among the pre-revolution elite is driven by selective violence against the elite during the Land Reform and Cultural Revolution. The systematic killing of landlords and rich peasants, although well documented (e.g., Teiwes, 1987), was limited in scale as most of the pre-revolution elite survived the revolutions. To the extent that killing could result in selective survival, and violence could lead to selective suppression of the pre-revolution elite's advantages, attitudes, etc., our baseline results on intergenerational persistence can be driven by such selection mechanisms. Selective killing and violence can operate in two (ex-ante ambiguous) directions. If killing and violence were more intense in historically unequal places, systematically targeting those wealthy and capitalism-aligned individuals or regions, then such a selection would generate a downward bias in our estimates of intergenerational

[48] Rural elite households may also have been more likely to have urban relatives, who could have supported them after the urban economy had picked up in the Reform era.

[49] Based on our calculation using CFPS data, as of 2010, about 12% of rural residents among the children generation have received transfers from relatives not co-residing with them. Not all of these transfers are remittances, let alone from overseas. Compared to those from non-elite households, individuals from pre-revolution elite households are in fact slightly less likely to receive such transfers, and conditional on receiving the transfer, the amount is also slightly lower.

persistence. If instead, killing and violence were more intense in historically less unequal places and more successful among individuals with fewer resources and a lower capacity to resist, or among those unable to ensure that their descendants perform well, then such a selection could generate a pattern of persistence and upwardly bias the estimates on intergenerational persistence. We examine the relationship between pre-revolution local inequality (such as the landlord share of the population or land ownership Gini coefficients) and the intensity of violence (both cases of killings and cases of persecutions) reported in the corresponding counties. Statistics on mass killings during the Cultural Revolution are compiled from Walder and Su (2003), and we collected data on persecution cases during the Land Reform from the County Gazetteers.[50] We examine the violence during the Land Reform and the Cultural Revolution separately, and the results are presented in Appendix Tables A.17 and A.18, respectively. Violence was not associated with regional inequality prior to the revolutions. More importantly, the overall level of violence, albeit not zero, was too low to drive the persistence pattern that we document.

Fourth, the pattern of pre-revolution elite individuals working harder and valuing wealth more in the children generation could be explained by their willingness to exact revenge and rectify the persecutions experienced by the previous generations of their households. A similar hypothesis is that the persecution of the grandparents and parents generations established or made salient an elite group identity, which would be critical in fostering a set of work ethics and other "productive" values and attitudes. The direct test of this hypothesis requires observing attitudes and values among the grandparents generation, *prior* to the revolutions. We are unable to implement this due to data limitations. However, we provide two elements inconsistent with the persecution-induced resentment hypothesis. First, resentment and revenge motivations should be stronger in households whose members suffered deaths during the revolutions. However, we do not observe differences in work ethics between the elite and non-elite in the children generation depending on whether their parents were still alive by 2010 (Table 6, Column 4). Of course, not all the perished individuals in the parents generation passed away due to persecutions during the revolutions. But to the extent that some of them did, we do not observe that such deaths correspond to larger differences in cultural traits and attitudes between the elite and non-elite. Second, persecution-induced revenge and resentment would be weaker among those in the children generation who do not know their class label, since the potential family persecution experiences during the revolutions would be much less salient without the explicit knowledge on one's class label.[51] We do not observe such a pattern — if anything, those among the children generation

[50] We extract the violence numbers from the text description of the Land Reform. We only find 67 counties (out of 876 counties in total) that document the violence quantitatively. For other counties, gazetteers do not record violence during the Land Reform. The violence data include number of deaths, the population being struggled (*douzheng*), and the number of people labeled as anti-revolutionary (*fangeming*). Columns 1–3 in Table A.17 report the estimates with the full sample. Columns 4 and 5 are based on the 67 counties with quantitative violence data. Cultural Revolution violence data was collected and shared by Andrew Walder.

[51] As the children generation is no longer required to know their own class labels since the *Agrarian Reform Law* was repealed in 1987, the decision to transmit such knowledge rests almost entirely upon households, and hence is likely

of the pre-revolution elite who do not explicitly know their class labels are *more* likely to exhibit stronger work ethics, as well as pro-market and pro-wealth attitudes.

Fifth, the stark rebound of the pre-revolution elite in the children generation could be affected by selective migration. In our analysis based on the CFPS data, we indeed cannot observe income for individuals who left their counties of origin *and* established new households at destination. Such emigration would lead to a bias in our estimate of the elite income premium if migrants were negatively selected in terms of income. On the other hand, positive selection would imply that the income gap is a lower bound. Appendix Table A.19 suggests that selective migration in the children generation based on the pre-revolution elite status is negligible, but CFPS data do not cover split-off households outside the county. In Appendix Table A.20, we rely on census data to explore the selection of rural emigrants (both separate individuals and entire households), using education as a proxy for earnings potential.[52] We find that in 2000, college-educated individuals with an agricultural *hukou* were 8.36% more likely to live in another county than their county of registration. Results are similar when we consider migration of entire households.[53] Positive selection on education is also clear in 2005, after the big surge in rural-urban migration. These results suggest that our estimate of the elite premium in the children generation is likely to be a lower bound.

Finally, one could attribute part of the persistence and rebound to innate traits and characteristics. This could include genetics, personalities broadly defined, intelligence, and emotional intelligence. We do not have direct measures in any of these dimensions, and hence we cannot rule in or rule out the possibility that these characteristics contribute to the persistence.

7 Conclusion

This paper investigates the extent to which efforts to eradicate inequality in wealth and education can shut off intergenerational transmission of socioeconomic status. The Communist and Cultural Revolutions in China were among the most radical social transformations in recent human history. The redistribution of wealth, in particular of land, was massive, and we show that the immediate goal of achieving extreme redistribution and homogenization of the population was achieved. The Cultural Revolution also closed the educational gap in the generation that grew up during the Cultural Revolution, effectively interrupting the transmission of educational achievements across generations.

However, three decades after the introduction of economic reforms in the 1980s, the descendants of the former elite earn a 16–17% higher annual income than those of the former non-elite,

endogenously chosen by the grandparents and parents generations.

[52]To reduce endogeneity concerns, the sample is restricted to non-migrants over 25 and migrants who had migrated after 25 and were thus likely to have completed their studies at the time of migration.

[53]We consider that the whole household migrated if all members are registered in another county than the county of residence.

such as poor peasants. Individuals whose grandparents belonged to the pre-revolution elite systematically bounced back, despite the cards being stacked against them and their parents. They could not inherit land and other assets from their grandparents, their parents could not attend secondary school or university due to the Cultural Revolution, their parents were unwilling to express previously stigmatized pro-market attitudes in surveys, and they reside in counties that have become more equal and more hostile toward inequality today. One channel we emphasize is the transmission of values across generations. The grandchildren of former landlords are more likely to express pro-market and individualistic values, such as approving of competition as an economic driving force, and willing to exert more effort at work and investing in higher education. In fact, the vertical transmission of values and attitudes — "informal human capital" — is extremely resilient: even stigmatizing public expression of values may not be sufficient, since the transmission in the private environment could occur regardless.[54]

Intergenerational value transmission could hinder social mobility. Imagine that rich parents who have become wealthy because of hard work transmit to their children the values that made them rich to begin with, such as delayed gratification, saving for productive investments, a propensity to acquire human capital through education, and work ethics that emphasize effort. As a result, the children of rich parents may have an advantage since they have the necessary "cultural tools" to acquire income and wealth, above and beyond other advantages such as bequests. Poor and uneducated parents may transmit the opposite set of values, and their children could remain stuck in poverty. Thus, holding constant all other factors interfering with social mobility, intergenerational transmission of values could be an important force that reduces it. Moreover, value transmission within households may be largely immune to policy interventions that aim to level the playing field, making it an even more powerful source of persistence across generations. Indeed, the transmission of values and socioeconomic status within the family seems to have survived extraordinarily broad and deep institutional and political changes, with an exceptional resilience.

[54]The closure of schools (and especially universities) could actually strengthen vertical transmission. For example, not spending a substantial amount of time with schoolmates may make exposure to the values and attitudes held by parents more salient and distinguishable; not moving to a different city to attend university may also make one more likely to spend time with parents and other household members.

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Figures and tables

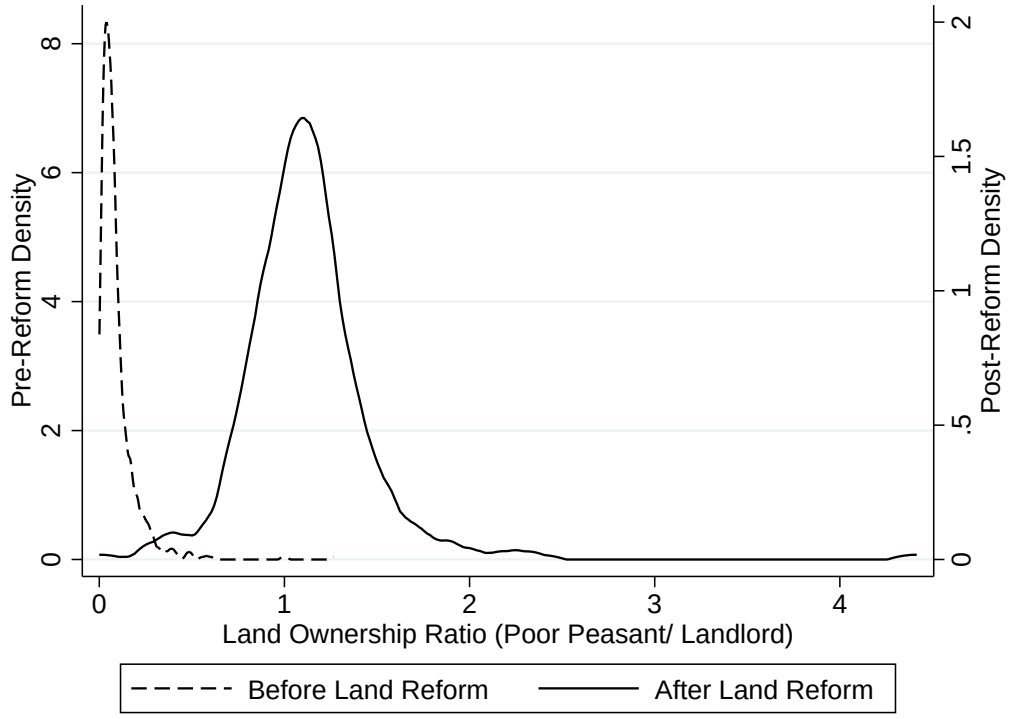


Figure 1: This figure plots the ratio of land ownership per poor peasant to the land ownership per landlord before and after the Land Reform. The dashed line is the probability density function of the pre-Reform ratio. The solid line is the probability density function of the post-Reform ratio.

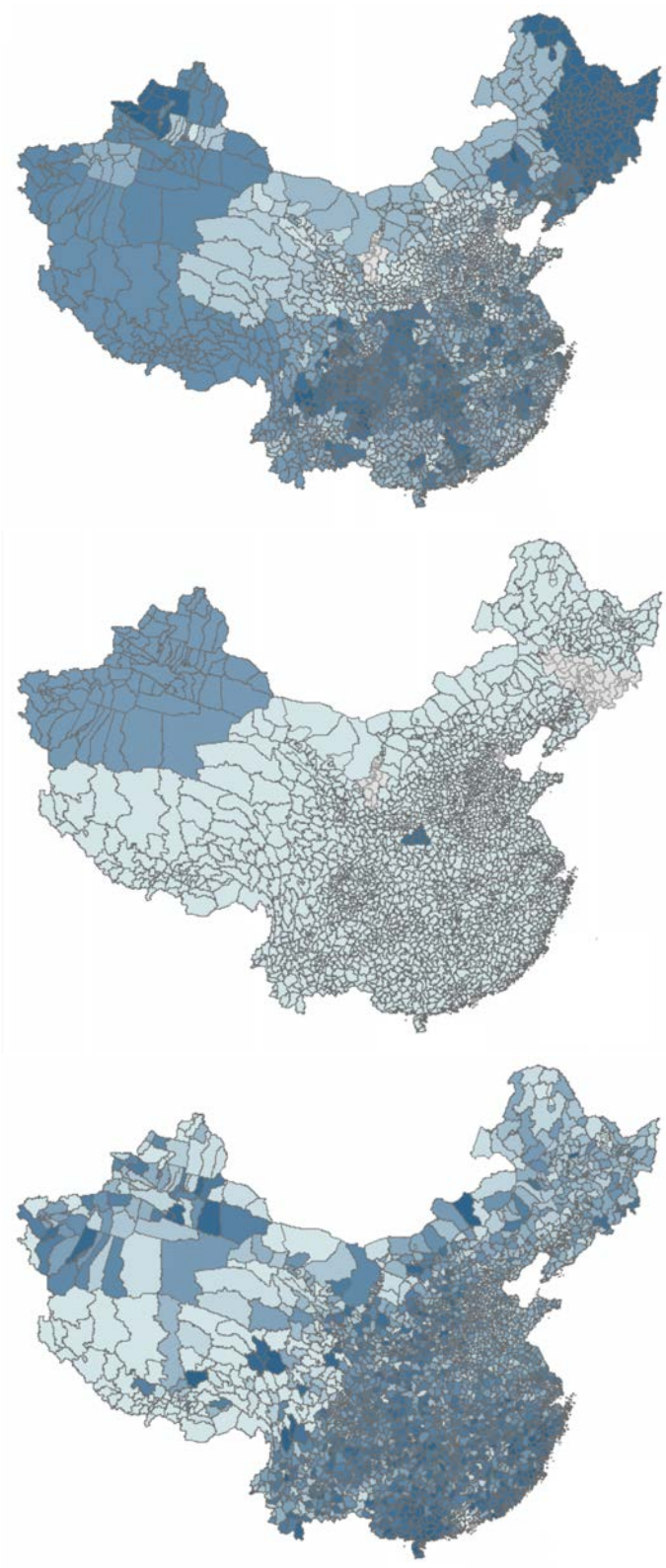


Figure 2: This figure displays Gini coefficients across Chinese counties. Darker color indicates higher within-county inequality. Top panel: Gini coefficients in land ownership prior to the Land Reform; counties with missing observations are imputed using prefecture averages (province averages if all counties in a prefecture have missing data); provinces with no data are shown in gray. Middle panel: Gini coefficients in land ownership just after the Land Reform; same imputation strategy for counties with missing values. Gini coefficients without imputation are shown in Figure A.6. Bottom panel: Gini coefficients in housing size in 2000.

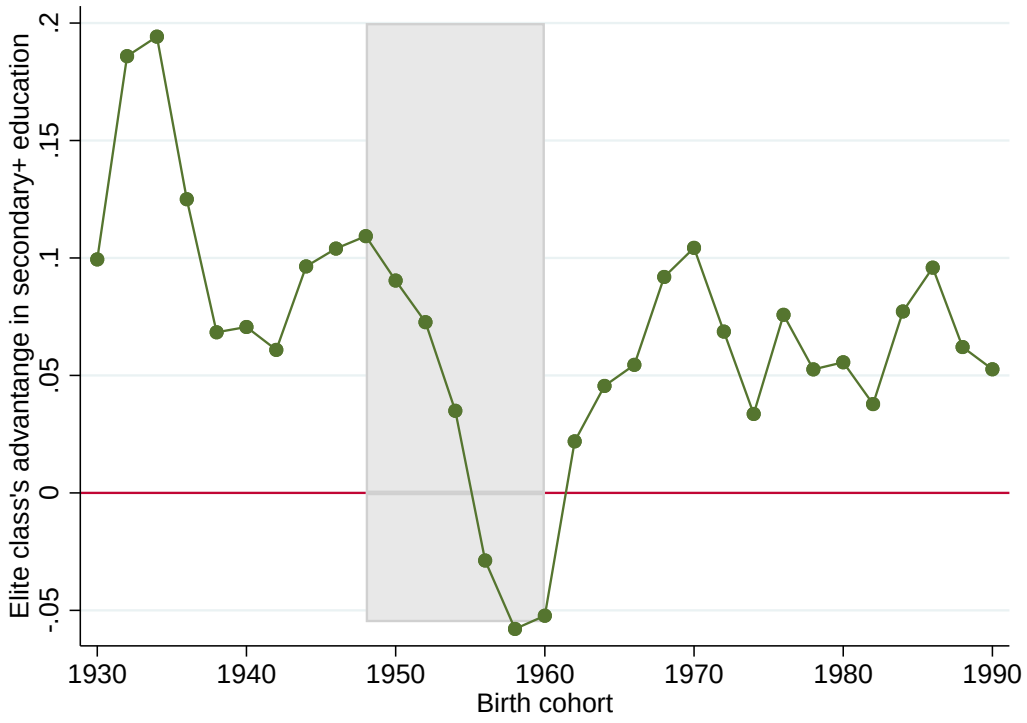


Figure 3: This figure plots the elite class's advantage in educational attainment — the average difference in the probability in completing at least secondary education between the elite class (defined as individuals from landlord or rich peasant households) and the non-elite class. The shaded area indicates the birth cohorts whose education could be potentially affected by the Cultural Revolution, i.e., those who would have completed or entered secondary school (age 12–18) between the start of the Cultural Revolution in 1966 and the normalization of education in 1972.

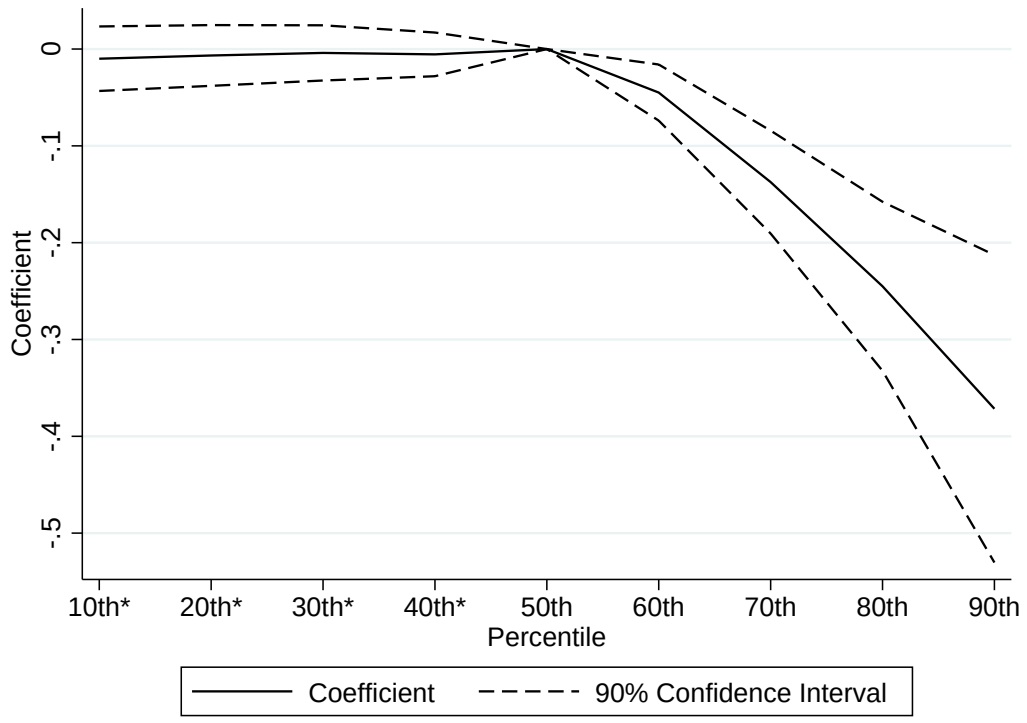


Figure 4: This figure plots coefficients from regressing the ratio between the X^{th} and 50^{th} percentiles of amenity-adjusted housing area distribution on the pre-Reform land ownership Gini. We reverse the ratios if $X < 50$ (indicated by *), so that one can interpret negative coefficients across the entire spectrum of X as indicating a reversal between historical and contemporary inequality. Sample: counties with more than 80 households in the our random 0.1% extract of the 2000 Census. The corresponding coefficients are reported in Appendix Table A.7, Panel A. Regression coefficients are also available with imputed Gini coefficients in Panel B. Results based on alternative samples are also reported in Table A.7 and plotted in Figure A.12.

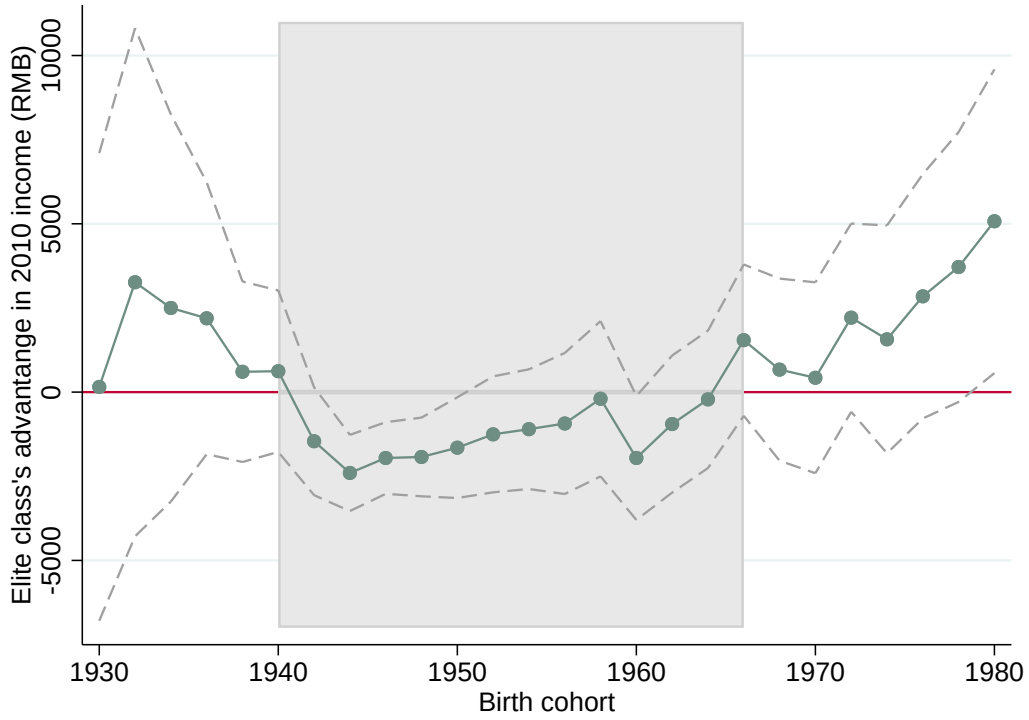


Figure 5: This figure plots the elite class's advantage in contemporary income — the average difference in 2010 income between the elite class (defined as individuals from landlord or rich peasant households) and the non-elite class. The shaded area indicates the birth cohorts belonging to the "parents" generation.

Table 1: Parents and children generations of the pre-revolution elite

	Both generations		Parents generation			Children generation		
			Elite class diff.		Overall	Elite class diff.		Overall
	Mean	Std	Coef.	Std. err.	Mean	Coef.	Std. err.	Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: income								
Annual labor income	8,809.0	24,048.0	-1,105.4**	(474.7)	6,148.0	1,911.5**	(854.7)	11,628.0
Panel B: educational performance								
Years of education completed	5.547	4.670	0.156	(0.168)	4.419	0.748***	(0.190)	6.743
Completed at least junior high school	0.139	0.346	-0.026**	(0.011)	0.102	0.041**	(0.018)	0.178
Math skills tested in 2010	2.129	1.022	0.001	(0.035)	1.880	0.162***	(0.045)	2.393
Panel C: labor market sector choices								
Self-employed	0.120	0.325	0.033*	(0.017)	0.084	0.046**	(0.022)	0.151
Employed in public sector	0.042	0.200	-0.013*	(0.008)	0.030	-0.016	(0.010)	0.052
Career prestige score (ISEI)	30.410	12.970	-0.212	(0.534)	28.06	1.471**	(0.730)	32.44
Panel D: political and social connections								
Communist Party member	0.074	0.261	-0.055***	(0.010)	0.094	0.012	(0.011)	0.052
Experienced hunger during famine	0.131	0.338	0.033*	(0.018)	0.228	-	-	-
Co-living with parents	0.118	0.323	0.015**	(0.006)	0.010	0.214***	(0.019)	0.233
Visit friends during holidays	3.711	6.932	0.257	(0.273)	3.330	0.564*	(0.317)	4.115

Notes: Columns 3 and 6 (4 and 7) present regression coefficients (standard errors) of estimated differences between members of the elite and non-elite households for the parents and children generations, respectively, controlling for cohort fixed effects and residence county fixed effects. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: parents (1940–1965 birth cohorts; N = 10,430) and children generations (1966–1990 birth cohorts; N = 9,844). Note that Panel C only contains employed individuals (parents generation: N = 5,220; children generation: N = 6,022).

Table 2: Inequality in land properties before and after revolutions

	Gini coefficient in 2000 (Amenity-adjusted housing area per capita)					
	(1)	(2)	(3)	(4)	(5)	(6)
Pre-revolution land Gini	-0.026***	-0.025***	-0.025***	-0.024***	-0.025***	-0.021***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)
# observations	410	410	410	410	410	284
Control for province FEs	Yes	Yes	Yes	Yes	Yes	Yes
Control for 2000 night light level	No	Yes	Yes	Yes	Yes	Yes
Control for 1950 education level	No	No	Yes	Yes	Yes	Yes
Control for geographic attributes	No	No	No	Yes	Yes	Yes
Control for market access	No	No	No	No	Yes	Yes
Regions	All	All	All	All	All	Non-coastal

Notes: This table reports the relation between the pre-reform land Gini and the 2000 Gini of the amenity-adjusted housing area per capita. All specifications include province fixed effects. The geographical attributes (Columns 4–6) include distances (km) to the shore, fast-speed road network, and major rivers, as well as the means and standard deviations of elevation and slope. Market access (Columns 5 and 6) include both external and internal market access: external (resp., internal) market access is defined as the weighted sum of the populations (from the 1953 Census) in coastal (resp., non-coastal) counties; as is standard in the economic geography literature since Harris (1954), the weights are the inverse of the exponential of distance, measured in km; coastal counties are defined as counties in provinces with access to the sea. Standard errors are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: counties with more than 80 households in the our random 0.1% extract of the 2000 Census.

Table 3: Decomposing income differences

	Total annual labor income						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Elite class	1,911.5**	2,006.2**	1,973.6**	1,932.8**	290.1	471.7	45.0
	(854.7)	(850.3)	(853.6)	(853.0)	(855.1)	(844.7)	(832.4)
County FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cohort FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sector FE	No	Yes	No	No	No	No	No
Province×Sector FE	No	No	Yes	No	No	No	No
Migrants FE	No	No	No	Yes	No	No	No
Control for education	No	No	No	No	Yes	No	Yes
Control for values	No	No	No	No	No	Yes	Yes

Notes: All specifications include cohort fixed effects and county fixed effects. Column 2 additionally includes sector fixed effects; Column 3 includes province×sector fixed effects; Column 4 includes a migrant indicator variable, defining migrants as individuals whose current county of residence is different from their birth place; Column 5 controls for years of education; Column 6 controls for all available values and work ethics variables; and Column 7 combines the controls of Columns 5 and 6. Columns 5–7 additionally control for whether the respondent is co-living with her parents. The mean of the dependent variable is RMB 11,628 (std. dev. 28,716). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: 1966–1990 birth cohorts; number of observations = 9,844.

Table 4: Education inequality

	Education inequality: Top quartile minus bottom quartile					
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: Grandparents generation					
Pre-revolution land Gini	0.536	0.245	0.222	0.457	0.262	0.0539
	(0.415)	(0.387)	(0.327)	(0.416)	(0.337)	(0.424)
	Panel B: Parents generation					
Pre-revolution land Gini	-0.317	-0.331	-0.305	-0.249	-0.411	-0.675
	(0.432)	(0.435)	(0.365)	(0.444)	(0.375)	(0.434)
	Panel C: Children generation					
Pre-revolution land Gini	0.595*	0.476	0.483	0.642*	0.456	0.0593
	(0.341)	(0.337)	(0.331)	(0.350)	(0.338)	(0.416)
# observations	410	410	410	410	410	284
Control for province FEs	Yes	Yes	Yes	Yes	Yes	Yes
Control for 2000 night light level	No	Yes	Yes	Yes	Yes	Yes
Control for 1950 education level	No	No	Yes	Yes	Yes	Yes
Control for geographic attributes	No	No	No	Yes	Yes	Yes
Control for market access	No	No	No	No	Yes	Yes
Regions	All	All	All	All	All	Non-coastal

Notes: The dependent variable is the gap in average educational attainment between the most educated 25 percent and least educated 25 percent. Panel A reports results for the grandparents generation, Panel B for the parents generation, and Panel C for the children generation. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: counties with more than 80 households in the our random 0.1% extract of the 2000 Census.

Table 5: Values of the children generation of the pre-revolution elite

	Work ethics			Pro-market values		
	Hard work is critical to success	Hours worked during workdays	Hours on leisure during weekends	Important to become rich	Inequality is desirable	Competition is desirable
	(1)	(2)	(3)	(4)	(5)	(6)
Elite class	0.076***	0.595***	-0.808***	0.092	0.068	0.081**
	(0.028)	(0.186)	(0.145)	(0.057)	(0.064)	(0.035)
DV mean	3.911	5.916	13.13	3.645	2.949	3.792
DV std. dev.	0.629	4.196	3.331	1.189	1.014	0.732

Notes: The dependent variables capture three dimensions of work ethics: view that hard work is critical to success, hours worked during workdays, and hours spent on leisure during weekends, as well as pro-market values: importance to become rich, belief that inequality is desirable, and belief that competition is desirable for society. The independent variable is a dummy variable equal to 1 if the grandfather's class label is landlord or rich peasant, and 0 otherwise. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: 1966–1990 birth cohorts; number of observations = 9,844. The average number of observations is 9,460, as a different number of respondents declined to answer a specific question.

Table 6: Co-residence and vertical transmission of values

	Hard work is critical to success			
	All	Parents alive and co-living	Parents alive and not co-living	Parents not alive
	(1)	(2)	(3)	(4)
Elite class	0.076***	0.134***	0.045	0.017
	(0.028)	(0.043)	(0.060)	(0.055)
# observations	9,844	2,291	3,680	3,873
DV mean	3.911	3.924	3.891	3.922
DV std. dev.	0.629	0.649	0.628	0.617

Notes: All columns control for cohort fixed effects and county fixed effects. Column 1 includes all respondents in the children generation; Column 2 restricts the sample to individuals residing with their parents at the time of the survey; Column 3 focuses on children whose parents are still alive but with whom they do not reside; and Column 5 uses only those in the children generation whose parents are no longer alive. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: 1966–1990 birth cohorts.

ONLINE APPENDIX (NOT FOR PUBLICATION)

Figure A.1: Measuring land during the Land Reform.

Figure A.2: Students chanting revolutionary slogans at Peking University during the Cultural Revolution.

表 2-2-1　三河县 1946 年土地改革前后各阶级土地占有情况变化表

项目 / 阶级成分	户数	人口		土地改革前			土地改革后			
		人口	占全县总人口%	占有土地（亩）	占全县总土地%	每人平均土地（亩）	占有土地（亩）	占全县总土地%	每人平均土地（亩）	
地主	694	5504	2.5	81863.9	12.6	14.87	22023.7	3.4	4	Landlords
富农	2849	18710	8.7	135640.53	20.8	7.25	94904.42	14.7	5.07	Rich peasants
中农	13173	71364	33.2	236716.77	36.4	3.32	240549.84	37.3	3.37	Middle peasants
贫农	24327	119565	55.6	196673.34	30.2	1.64	287418.43	44.6	2.4	Poor peasants
总计	41043	215134		650894.56		3.03	644896.39		3	Total
	# house-holds	# individuals	%	Land area (*mu*)	Land area (%)	Land per person (*mu*)	Land area (*mu*)	Land area (%)	Land per person (*mu*)	Item / Class status
		Population		Pre-Land Reform			Post-Land Reform			

Figure A.3: Sample of County Gazetteer's record on land distribution before and after the Land Reform.

Figure A.4: Sample of *County Gazetteer*'s record on land distribution before and after the Land Reform.

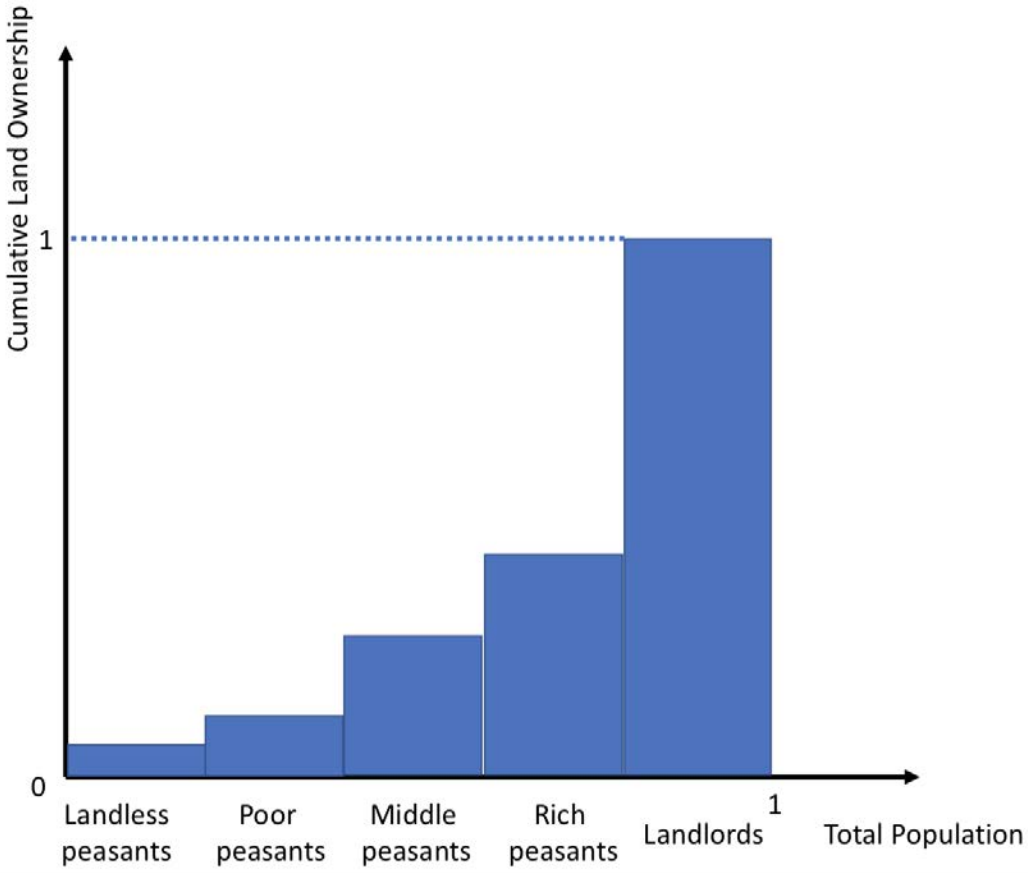


Figure A.5: This figure gives a graphical illustration of the Gini coefficient calculation.

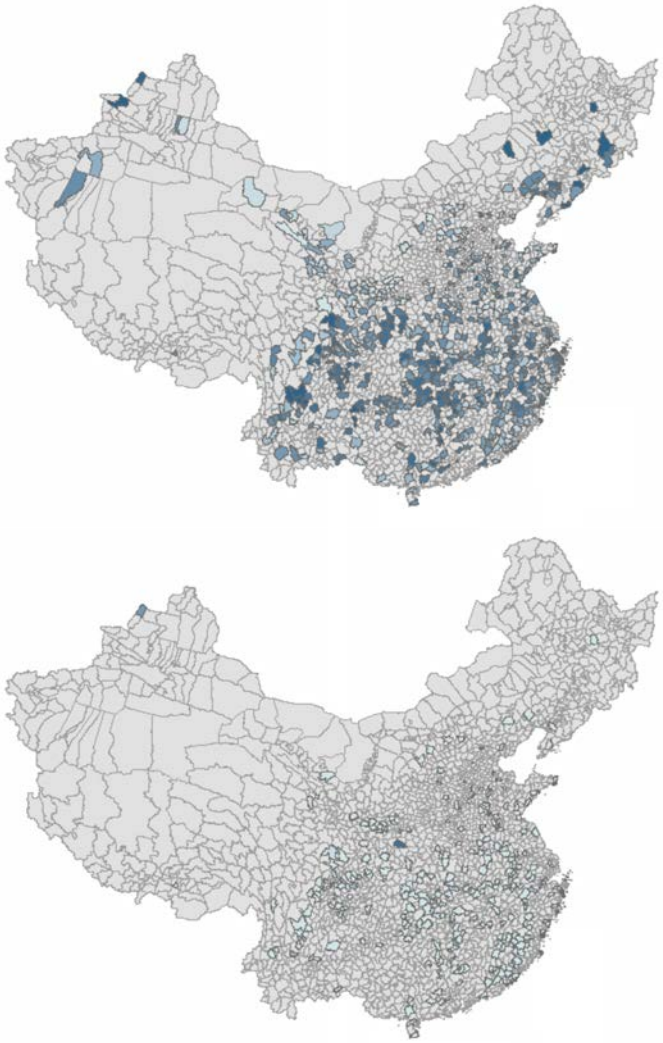


Figure A.6: This figure displays Gini coefficients across Chinese counties immediately before and after the Land Reform, without imputing for missing values. Darker color indicates higher within-county inequality; counties with missing information are shown in gray. Top panel: Gini coefficients of land ownership prior to the Land Reform (only counties with non-missing observations). Bottom panel: Gini coefficients of land ownership just after the Land Reform (only counties with non-missing observations).

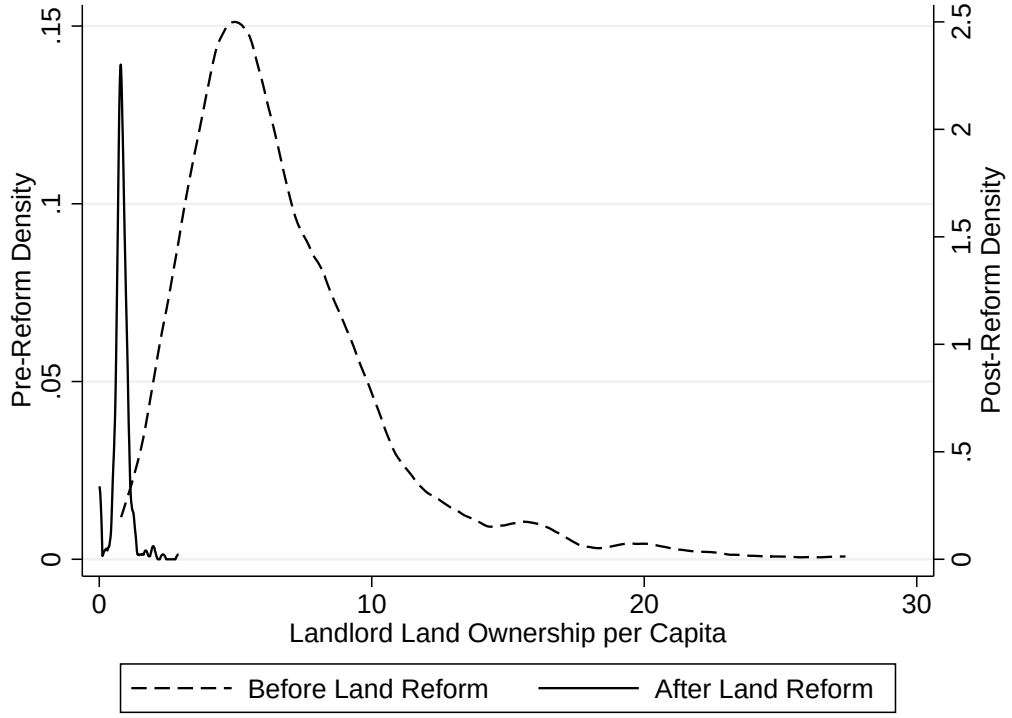


Figure A.7: This figure plots the number of acres of land owned per landlord household member before and after the Land Reform. The dashed line is the probability density function of pre-Reform land ownership. The solid line is the probability density function of post-Reform land ownership.

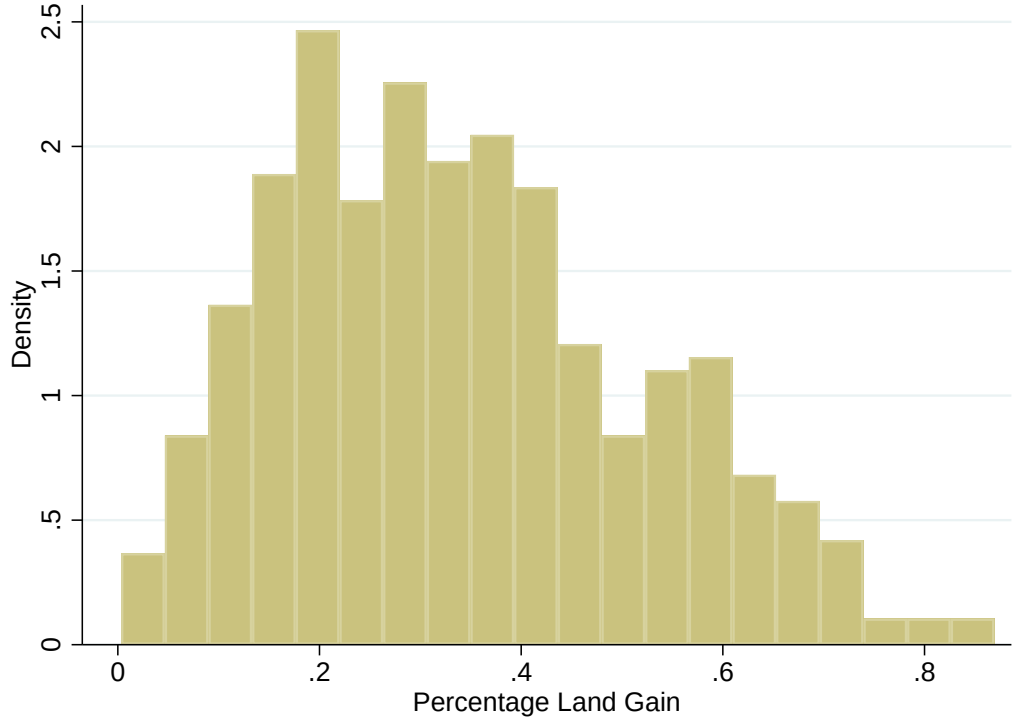


Figure A.8: This figure plots the probability density function of the average percentage land gain (% arable land in the county) for every 1 percent of the peasant population (in the hired, poor, and middle peasant categories) after the Land Reform across counties.

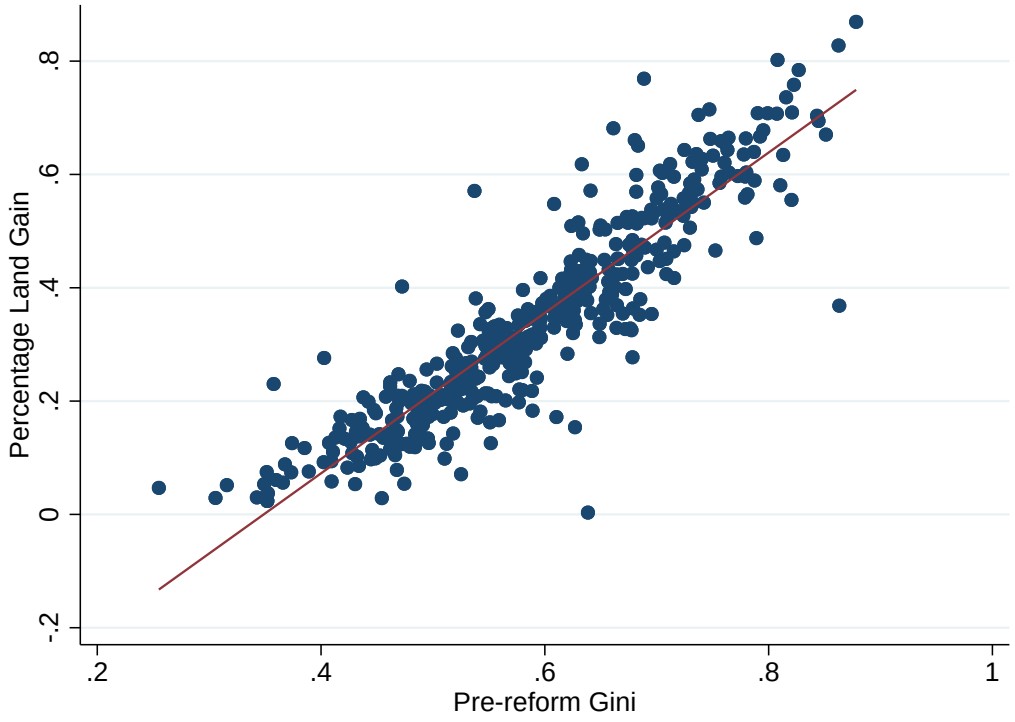


Figure A.9: This figure plots the pre-Reform Gini and the average percentage land gain (% arable land in the county) for every 1 percent of the peasant population (in the hired, poor, and middle peasant categories) after the Land Reform. The red line is the fitted line.

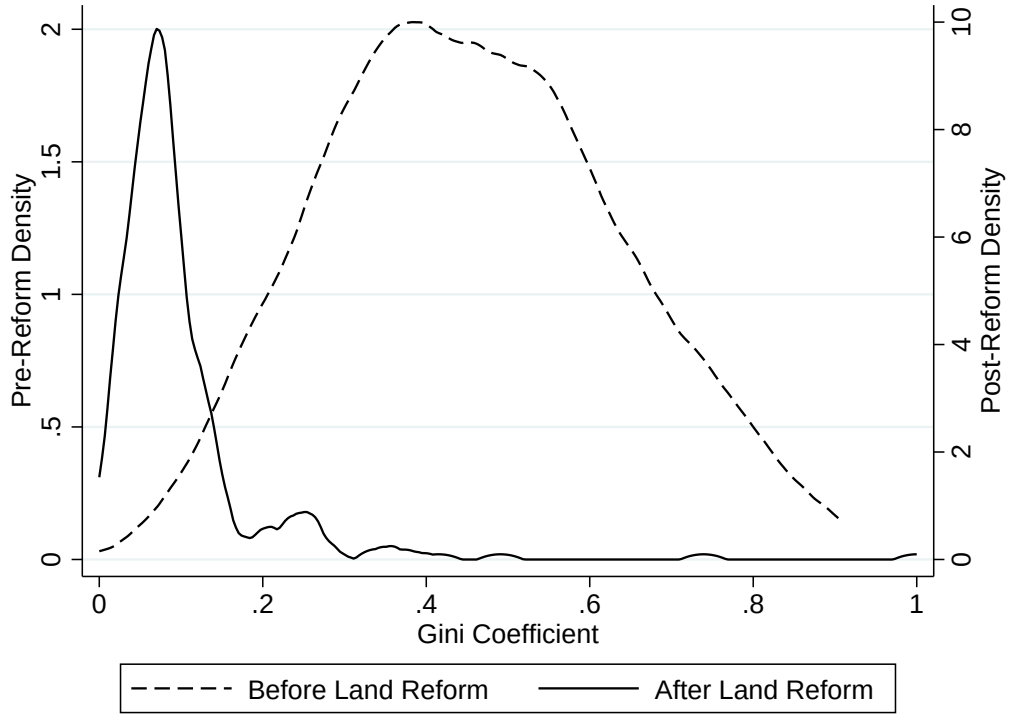


Figure A.10: This figure plots the Gini coefficient of land ownership before and after the Land Reform. The dashed line is the probability density function of the pre-Reform Gini coefficient. The solid line is the probability density function of the post-Reform Gini coefficient.

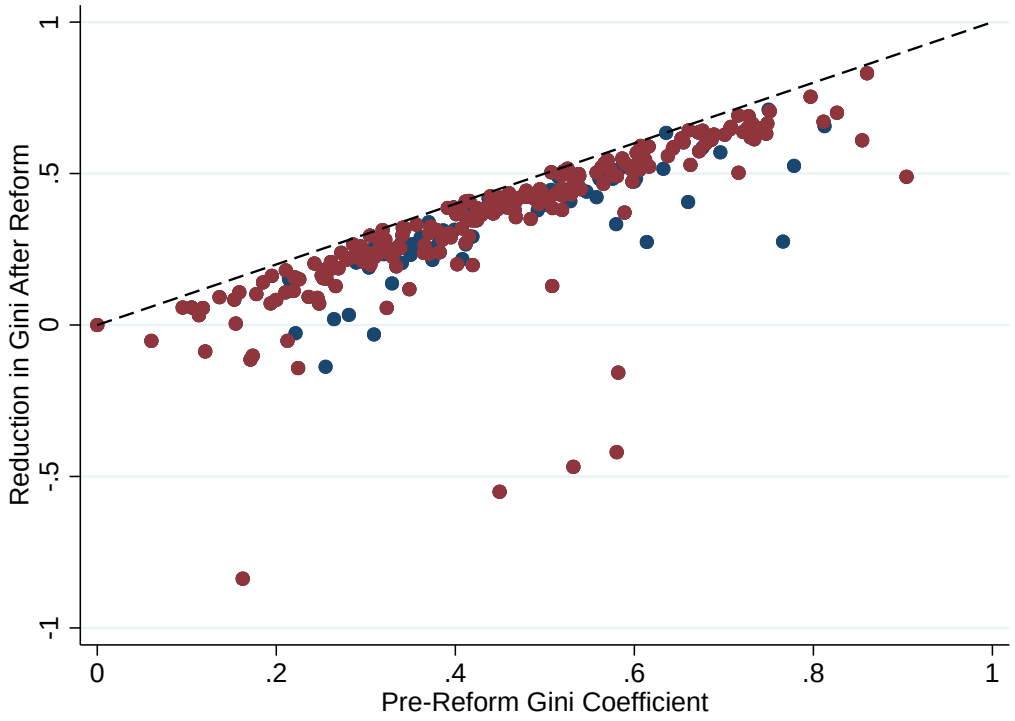
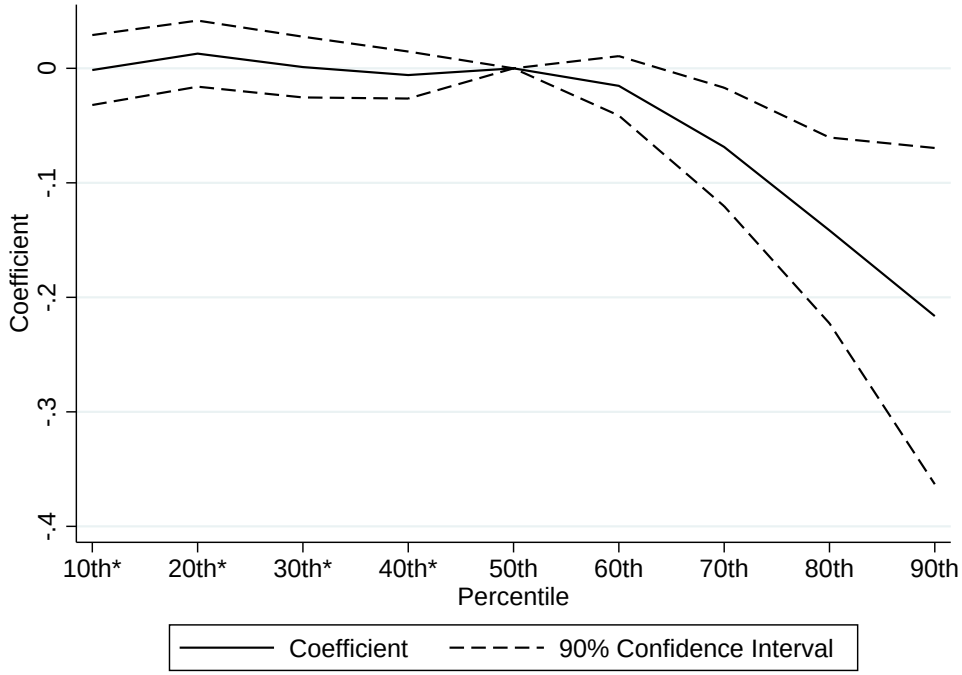


Figure A.11: This figure plots the Gini coefficient before the Land Reform against the Gini coefficient after the Land Reform. Blue (red) dots represent counties that have landlords owning more (less) land after the Land Reform than poor peasants, on average.



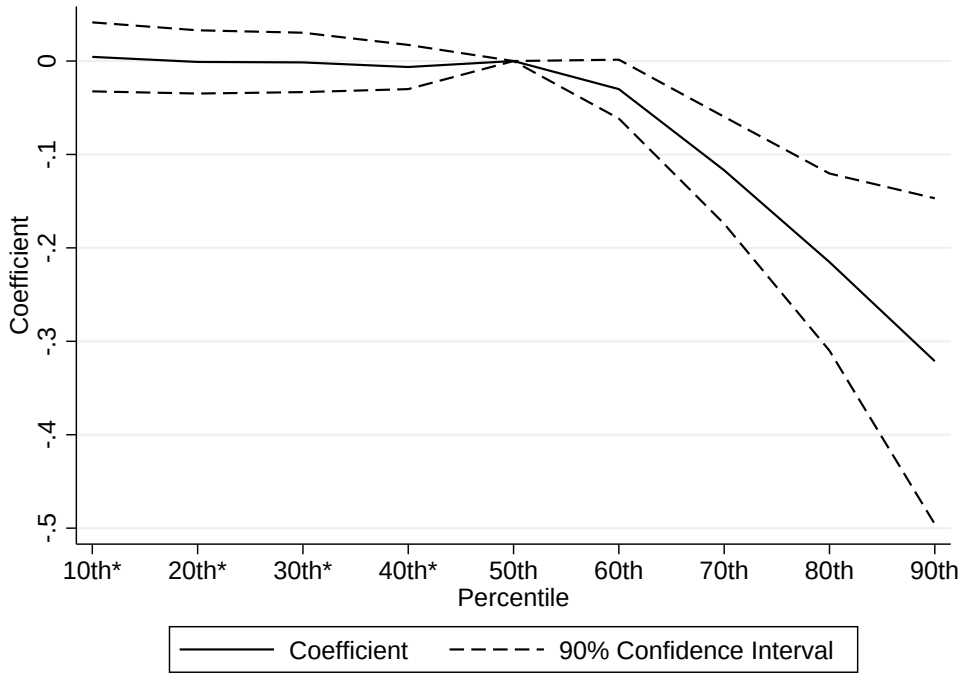


Figure A.12: These two figures plot the coefficients as in Figure 4 but with different samples. Top panel: Coefficients are estimated from counties with more than 50 households in our micro-sample of the 2000 Census. Bottom panel: The figure is based on counties with more than 100 households reported.

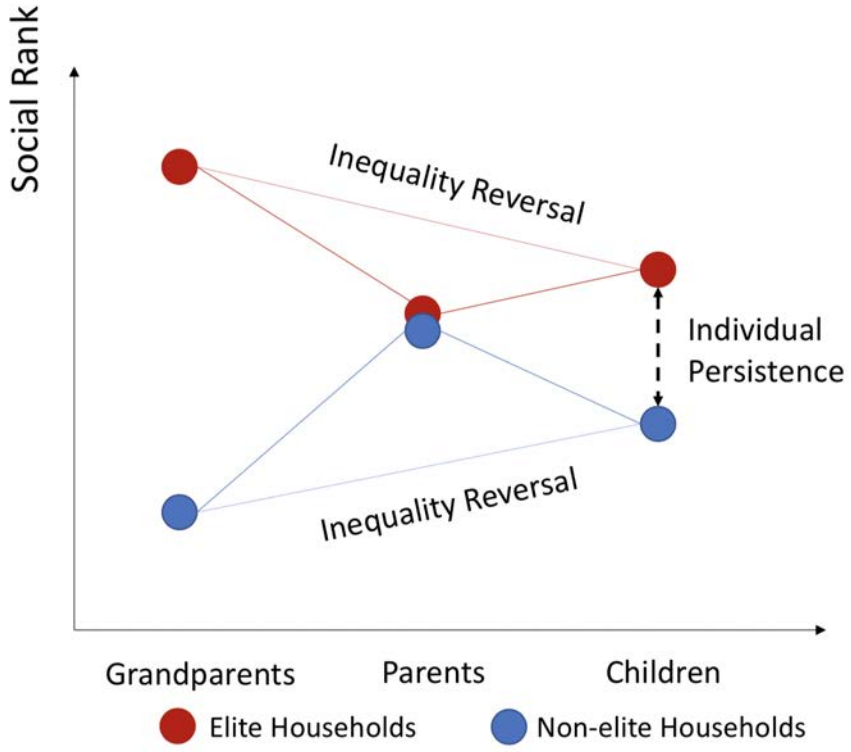


Figure A.13: This figure illustrates graphically how individual-level persistence and county-level reversal can be reconciled.

Table A.1: County level summary statistics and balance table

Panel A: Summary Statistics

	Sample 1: Counties with sufficient data			Sample 2: Counties with insufficient data			Sample 3: Counties with no data		
Variable	Mean	SD	Obs.	Mean	SD	Obs.	Mean	SD	Obs.
Distance to Shore	5.203	4.943	576	5.472	3.986	296	5.570	4.884	418
Longitude	112.419	6.968	576	112.56	6.650	296	111.628	8.818	418
Latitude	31.21	4.966	576	32.958	5.815	296	33.184	7.202	418
2000 GDP per capita	5279.456	4171.236	531	4665.502	3309.318	269	4655.372	3279.397	379
2000 Avg. Night lights	2.707	5.306	576	3.274	6.629	296	2.970	6.479	418
2000 Avg. Years of Edu.	6.926	0.908	576	7.051	0.986	296	6.964	1.209	418
2000 Median Years of Edu.	6.979	0.975	576	7.083	1.040	296	6.955	1.396	418
2000 Avg. Y. of Edu. (b. <1950)	4.344	1.195	576	4.438	1.332	296	4.348	1.519	418
2000 Median Housing Area	24.266	7.339	576	21.628	5.482	296	21.239	5.495	418
2000 Median Adj. Housing Area	30.163	10.200	576	26.526	7.248	296	26.123	7.697	418
2000 Housing Gini	0.324	0.029	576	0.315	0.028	296	0.306	0.030	418

Panel B: Balanced Test

	Sample 1 = Sample 2 + Sample 3			Sample 1 = Sample 2			Sample 1 + Sample 2 = Sample 3		
	Diff.	SE	p-value	Diff.	SE	p-value	Diff.	SE	p-value
Distance to Shore	0.030	0.093	0.750	0.055	0.079	0.483	0.07	0.084	0.404
Longitude	-0.044	0.122	0.718	0.053	0.102	0.605	0.132	0.109	0.224
Latitude	-0.125	0.094	0.182	-0.053	0.079	0.498	0.038	0.084	0.653
2000 GDP per capita	-61.583	249.495	0.805	126.573	193.903	0.514	254.603	207.672	0.220
2000 Avg. Night lights	-0.979	0.354	0.006	-0.582	0.327	0.075	-0.078	0.349	0.823
2000 Avg. Years of Edu.	-0.092	0.058	0.113	0.006	0.052	0.901	0.092	0.056	0.101
2000 Median Years of Edu.	-0.049	0.059	0.408	0.061	0.055	0.268	0.127	0.058	0.030
2000 Avg. Y. of Edu.	-0.012	0.079	0.876	0.089	0.068	0.187	0.151	0.072	0.037
2000 Median Housing Area	0.8	0.398	0.045	0.903	0.308	0.003	0.589	0.329	0.074
2000 Median Adj. Housing Area	0.927	0.543	0.088	1.124	0.422	0.008	0.821	0.451	0.069
2000 Housing Gini	-0.001	0.003	0.858	0.002	0.003	0.493	0.004	0.003	0.165

Notes: This table checks potential county selection bias due to partial unavailability of inequality data. Panel A reports summary statistics for three samples: Counties with complete data (Sample 1), Counties with incomplete data (Sample 2), and Counties with no data (Sample 3). Panel B executes three balance tests: Sample 1 = Sample 2, Sample 1 = Sample 2 + Sample 3, Sample 1 + Sample 2 = Sample 3. *2000 Avg. Y. of Edu. (b. <1950)* refers to the average educational attainment for cohorts born before 1950. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.2: Summary statistics — 2000 Population Census

Panel A: Education and real estate					
	Mean	S.D.	Median	25^{th} Percentile	75^{th} Percentile
	(1)	(2)	(3)	(4)	(5)
Years of Education	7.134	3.380	6.000	6.000	9.000
Years of Education (born before 1950)	4.512	1.146	4.500	3.836	5.065
Housing Area per capita	26.302	19.122	21.333	15.000	32.000
Amenity Adjustment Factor	0.240	0.150	0.200	0.200	0.300
Amenity-adjusted Housing Area	33.312	25.963	26.400	17.600	40.320

Panel B: Migration			
	Non-migrant or Same County	Other county, Same Province	Other Province
Migration by birth place	90.38%	4.93%	4.69%
Migration by place of registration	94.12%	2.46%	3.42%
Migration in 1995–2000	95.11%	1.99%	2.90%

Notes: Panel A summarizes the distribution (mean, standard deviation, median, 25^{th} percentile, and 75^{th} percentile) of five key variables from the 2000 Population Census in the 410 counties with more than 80 households and valid pre-reform Gini data (number of observations = 285,605): years of education, years of education of the population born before 1950, housing area per capita (in m^2), amenity adjustment factor, and amenity-adjusted housing area (see text for details). Panel B summarizes migration by birth place, migration by place of household registration (*hukou*), and migration between 1995 and 2000 among agricultural *hukou* holders in the full Census sample (number of observations = 881,416). The population is classified into three categories: non-migrants or migrants who moved within their birth county (resp. their county of registration, or their county of residence in 1995), migrants who crossed a county boundary but still reside in their birth province (resp. their province of registration, or their province of residence in 1995), and migrants living in a different province than the one their were born in (resp., their province of registration, or their province of residence in 1995). Sample: random 0.1% extract of the 2000 Population Census.

Table A.3: Robustness: county-level inequality persistence with different amenity adjustments

Panel A: Gini of Unadjusted Housing Area							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gini	-0.047***	-0.035***	-0.044***	-0.044***	-0.044***	-0.043***	-0.037**
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.015)
2000 GDP per capita		-0.0066***					
		(0.0019)					
2000 Avg. Night lights			-0.80***	-0.62***		-0.52**	-0.57
			(0.21)	(0.22)		(0.23)	(0.37)
Avg. Edu. (b. <1950)				-0.0029**		-0.0026**	-0.0018
				(0.0013)		(0.0013)	(0.0017)
# observations	410	371	410	410	410	410	284
Panel B: Equal-weighted Amenity							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gini	-0.036***	-0.036***	-0.036***	-0.036***	-0.033***	-0.034***	-0.037**
	(0.012)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.015)
2000 GDP per capita		-0.0066***					
		(0.0019)					
2000 Avg. Nightlight			-0.80***	-0.62***		-0.52**	-0.57
			(0.21)	(0.22)		(0.23)	(0.37)
Avg. Edu. (b. <1950)				-0.0029**		-0.0026**	-0.0018
				(0.0013)		(0.0013)	(0.0017)
# observations	410	371	410	410	410	410	284
Panel C: PCA-weighted Amenity							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gini	-0.031***	-0.032***	-0.031***	-0.031***	-0.029**	-0.029**	-0.037**
	(0.011)	(0.012)	(0.011)	(0.011)	(0.012)	(0.012)	(0.015)
2000 GDP per capita		-0.0080***					
		(0.0018)					
2000 Avg. Nightlight			-0.95***	-0.79***		-0.68***	-0.57
			(0.20)	(0.21)		(0.22)	(0.37)
Avg. Edu. (b. <1950)				-0.0027**		-0.0024*	-0.0018
				(0.0012)		(0.0013)	(0.0017)
# observations	410	371	410	410	410	410	284
Geographical Features	No	No	No	No	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regions	All	All	All	All	All	All	Non-coastal

Notes: This table reports different adjustments for housing amenities. We consider six indicator variables from the 2000 Census: 1. multistory house, 2. independent kitchen, 3. fuel or gas access, 4. tap water access, 5. hot bath, and 6. in-unit restroom. Total amenity inflator is assumed to be 0.6. Panel A reports the housing Gini coefficient calculated with the raw housing area per capita (in m^2). Panel B adjusts the housing area for all factors equally. Panel C adjusts the housing area with the following PCA loadings for the six different factors: 19.1%, 10.4%, 21.4%, 18.4%, 20.4%, and 10.3%, respectively. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.4: Robustness: county-level inequality persistence with different sampling criteria

Panel A: Household > 50							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gini	-0.016	-0.017	-0.017	-0.018	-0.013	-0.014	-0.020
	(0.011)	(0.012)	(0.011)	(0.011)	(0.012)	(0.012)	(0.013)
2000 GDP per capita		-0.00035					
		(0.0037)					
2000 Avg. Night lights			-0.481*	-0.574**		-0.440	-0.573*
			(0.252)	(0.254)		(0.275)	(0.323)
Avg. Edu. (b. <1950)				0.0045**		0.0052**	0.0062**
				(0.0019)		(0.0020)	(0.0025)
# observations	502	460	502	502	502	502	359
Panel B: Household > 80							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gini	-0.036***	-0.036***	-0.036***	-0.036***	-0.033***	-0.034***	-0.037**
	(0.012)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.015)
2000 GDP per capita		0.0011					
		(0.0037)					
2000 Avg. Night lights			0.046	0.014		0.243	0.778
			(0.375)	(0.401)		(0.417)	(0.685)
Avg. Edu. (b. <1950)				0.00053		0.0011	-0.00084
				(0.0023)		(0.0024)	(0.0032)
# observations	410	371	410	410	410	410	284
Panel B: Household > 100							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gini	-0.036***	-0.036**	-0.036***	-0.036***	-0.034**	-0.034**	-0.046***
	(0.013)	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)	(0.017)
2000 GDP per capita		0.0013					
		(0.0040)					
2000 Avg. Night lights			0.020	0.0095		0.419	0.391
			(0.440)	(0.471)		(0.488)	(0.825)
Avg. Edu. (b. <1950)				0.00016		0.00023	-0.00060
				(0.0025)		(0.0026)	(0.0037)
# observations	348	309	348	348	348	348	237
Geographical Features	No	No	No	No	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regions	All	All	All	All	All	All	Non-coastal

Notes: Panels A, B, and C report estimations with county samples including more than 50, 80, and 100 households, respectively (the benchmark in Table 2 is more than 80 households). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.5: Robustness: county-level inequality persistence with imputed Gini coefficients

Panel A: Household $>$ 50							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Imputed Gini	-0.013*	-0.017**	-0.012	-0.011	-0.011	-0.010	-0.013
	(0.0076)	(0.0085)	(0.0076)	(0.0075)	(0.0076)	(0.0075)	(0.011)
2000 GDP per capita		0.0059***					
		(0.0020)					
2000 Avg. Nightlight			0.102	0.074		0.110	-0.012
			(0.100)	(0.099)		(0.102)	(0.221)
Avg. Edu. (b. $<$1950)				0.0046***		0.0048***	0.0055***
				(0.00061)		(0.00065)	(0.0015)
# observations	2193	1518	2193	2193	2193	2193	982
Panel B: Household $>$ 80							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Imputed Gini	-0.026***	-0.028***	-0.026***	-0.024***	-0.025***	-0.023***	-0.032**
	(0.0082)	(0.0090)	(0.0082)	(0.0080)	(0.0081)	(0.0080)	(0.012)
2000 GDP per capita		0.00712***					
		(0.0020)					
2000 Avg. Nightlight			0.214*	0.212*		0.227*	0.445
			(0.127)	(0.124)		(0.128)	(0.296)
Avg. Edu. (b. $<$1950)				0.0057***		0.0059***	0.0032*
				(0.00068)		(0.00071)	(0.0018)
# observations	1708	1189	1708	1708	1708	1708	752
Panel C: Household $>$ 100							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Imputed Gini	-0.0256***	-0.0271***	-0.0252***	-0.0247***	-0.0252***	-0.0245***	-0.0388***
	(0.0089)	(0.0097)	(0.0089)	(0.0087)	(0.00890)	(0.0087)	(0.016)
2000 GDP per capita		0.0059***					
		(0.0022)					
2000 Avg. Nightlight			0.299**	0.285**		0.359**	0.426
			(0.148)	(0.145)		(0.149)	(0.383)
Avg. Edu. (b. $<$1950)				0.0059***		0.0061***	0.0028
				(0.00074)		(0.00077)	(0.0021)
# observations	1384	962	1384	1384	1384	1384	605
Geographical Features	No	No	No	No	Yes	Yes	Yes
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regions	All	All	All	All	All	All	Non-coastal

Notes: Imputed Gini replaces missing county-level values with the prefecture average (or province average when all counties in a prefecture have missing data). Panels A, B, and C report estimations with county samples including more than 50, 80, and 100 households, respectively (the benchmark in Table 2 is more than 80 households). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.6: Robustness: county-level inequality persistence with urbanization control

Panel A: Full specification of Table 2							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gini	-0.036***	-0.036***	-0.036***	-0.036***	-0.033***	-0.034***	-0.037**
	(0.012)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.015)
2000 GDP per capita		0.0011					
		(0.0037)					
2000 Avg. Nightlight			0.046	0.014		0.243	0.778
			(0.375)	(0.401)		(0.417)	(0.685)
Avg. Edu. (b. <1950)				0.00053		0.0011	-0.00084
				(0.0023)		(0.0024)	(0.0032)
# observations	410	371	410	410	410	410	284
Panel B: Raw Gini with urbanization rate control							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gini	-0.037***	-0.036***	-0.037***	-0.037***	-0.034***	-0.034***	-0.037**
	(0.012)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.015)
Urban *Hukou* Percentage	0.012	0.037	0.014	0.014	0.021	0.015	0.015
	(0.021)	(0.036)	(0.024)	(0.026)	(0.022)	(0.026)	(0.039)
2000 GDP per capita		-0.0015					
		(0.0045)					
2000 Avg. Nightlight			-0.065	-0.066		0.153	0.602
			(0.421)	(0.428)		(0.445)	(0.820)
Avg. Edu. (b. <1950)				0.000021		0.00056	-0.0011
				(0.0025)		(0.0026)	(0.0033)
# observations	410	371	410	410	410	410	284
Panel C: Imputed Gini urbanization rate control							
	Gini (Amenity-adjusted Housing Area per capita)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Imputed Gini	-0.053**	-0.072**	-0.055**	-0.055**	-0.043	-0.046*	-0.046***
	(0.025)	(0.028)	(0.025)	(0.025)	(0.026)	(0.027)	(0.017)
Urban *Hukou* Percentage	0.034***	0.0069	0.034***	0.018***	0.034***	0.017**	0.025
	(0.0040)	(0.013)	(0.0040)	(0.0067)	(0.0042)	(0.0068)	(0.0195)
2000 GDP per capita		0.00661***					
		(0.0023)					
2000 Avg. Nightlight			0.226*	0.219*		0.228*	0.340
			(0.124)	(0.124)		(0.128)	(0.307)
Avg. Edu. (b. <1950)				0.0032***		0.0037***	0.0023
				(0.0011)		(0.0012)	(0.0020)
# observations	1708	1189	1708	1708	1708	1708	752

Notes: This table provides robustness with urbanization rate control. The urbanization rate is defined as the percentage of the county population with urban household registration, or *hukou*. Panel A reports the full specification of Table 2, Panel B introduces the urbanization control, and Panel C reports results using the imputed Gini. Columns are defined as in Table A.5. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: counties with more than 80 households in the our random 0.1% extract of the 2000 Census.

Table A.7: Breakdown of inequality into deciles

	Panel A: Counties with actual Gini Coefficients								
	Amenity-adjusted Gini	$10^{th}/50^{th}$	$20^{th}/50^{th}$	$30^{th}/50^{th}$	$40^{th}/50^{th}$	$60^{th}/50^{th}$	$70^{th}/50^{th}$	$80^{th}/50^{th}$	$90^{th}/50^{th}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Counties with more than 50 households								
Gini	-0.016	-0.0015	0.013	0.0011	-0.0059	-0.015	-0.069**	-0.142***	-0.216**
	(0.011)	(0.018)	(0.017)	(0.016)	(0.012)	(0.016)	(0.031)	(0.048)	(0.087)
	Counties with more than 80 households								
Gini	-0.036***	-0.010	-0.0066	-0.004	-0.0055	-0.045***	-0.137***	-0.245***	-0.372***
	(0.012)	(0.020)	(0.019)	(0.017)	(0.013)	(0.017)	(0.032)	(0.052)	(0.095)
	Counties with more than 100 households								
Gini	-0.036***	0.0045	-0.00095	-0.0015	-0.0064	-0.030	-0.117***	-0.215***	-0.321***
	(0.013)	(0.022)	(0.020)	(0.019)	(0.014)	(0.019)	(0.034)	(0.056)	(0.104)
	Panel B: Counties with imputed Gini Coefficients								
	Amenity-adjusted Gini	$10^{th}/50^{th}$	$20^{th}/50^{th}$	$30^{th}/50^{th}$	$40^{th}/50^{th}$	$60^{th}/50^{th}$	$70^{th}/50^{th}$	$80^{th}/50^{th}$	$90^{th}/50^{th}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Counties with more than 50 households								
Imputed Gini	-0.013*	-0.013	0.0018	-0.011	-0.0084	-0.036*	-0.042**	-0.105***	-0.175***
	(0.0076)	(0.014)	(0.013)	(0.011)	(0.0083)	(0.021)	(0.020)	(0.031)	(0.058)
	Counties with more than 80 households								
Imputed Gini	-0.026***	-0.024	-0.016	-0.022*	-0.014	-0.049**	-0.085***	-0.177***	-0.271***
	(0.0082)	(0.016)	(0.014)	(0.011)	(0.0086)	(0.020)	(0.021)	(0.033)	(0.061)
	Counties with more than 100 households								
Imputed Gini	-0.026***	-0.010	-0.016	-0.021	-0.015*	-0.048**	-0.069***	-0.15***	-0.22***
	(0.0089)	(0.017)	(0.015)	(0.012)	(0.0091)	(0.023)	(0.023)	(0.036)	(0.067)

Notes: Panel A reports the coefficients used in Figure 4 and Appendix Figure A.12. Panel B reports a parallel set of coefficients with imputed Gini coefficients. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: Panel A — Actual Gini Sample; number of observations for counties with $>$ 50 households: 502, $>$ 80: 410, $>$ 100: 348; Panel B — Imputed Gini; number of observations for counties with $>$ 50 households: 2193, $>$ 80: 1708, $>$ 100: 1384.

Table A.8: Reversal of inequality at county level – heterogeneous effects

	Gini coefficient in 2000 (Amenity-adjusted housing area per capita)					
	(1)	(2)	(3)	(4)	(5)	(6)
Pre-revolution land Gini	-0.0004	-0.0350***	-0.0216**	-0.0341***	-0.0309***	-0.0247**
	(0.0111)	(0.0129)	(0.0096)	(0.0097)	(0.0088)	(0.0112)
× External market access	-0.0359***					
	(0.0134)					
× Internal market access		0.0149				
		(0.0148)				
× Distance to "156" factories			-0.0050			
			(0.0127)			
× Distance to 1948 railways				0.0170		
				(0.0128)		
× Distance to Ming courier stations					0.0149	
					(0.0119)	
× Nb. of imperial exam. graduates						0.0008
						(0.0127)
# observations	410	410	410	410	410	410
Control for province FEs	Yes	Yes	Yes	Yes	Yes	Yes
Control for 2000 night light level	Yes	Yes	Yes	Yes	Yes	Yes
Control for 1950 education level	Yes	Yes	Yes	Yes	Yes	Yes
Control for geographic attributes	Yes	Yes	Yes	Yes	Yes	Yes
Regions	All	All	All	All	All	All

Notes: This table analyzes heterogeneity in the relation between the pre-Reform land Gini and 2000 Gini of the amenity-adjusted housing area per capita. In each regression, we interact the pre-Land Reform Gini coefficient with one of six dimensions of heterogeneity: (i) external market access, (ii) internal market access, (iii) distance to the "156 Programme" factories built under Soviet cooperation in the 1950s (see Heblich et al., 2019), (iv) distance to railways before the revolutions, measured in 1948, (v) distance to Ming dynasty (1368–1644) courier stations, and (vi) total number of imperial examination graduates (*jinshi*) during the Qing dynasty (1644–1911), normalized by population in 1953. External (resp., internal) market access is defined as the weighted sum of the populations (from the 1953 Census) in coastal (resp., non-coastal) counties; as is standard in the economic geography literature since Harris (1954), the weights are the inverse of the exponential of distance, measured in km; coastal counties are defined as counties in provinces with access to the sea. In each regression, the heterogeneity variable is a dummy equal to 1 if the county's value is above the median and 0 otherwise. All specifications include the province fixed effects. Standard errors are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: counties with more than 80 households in the our random 0.1% extract of the 2000 Census.

Table A.9: Preference toward inequality

	Preference toward inequality		
	(1)	(2)	(3)
Pre-revolution Gini	-0.657***	-0.617***	-0.620***
	(0.156)	(0.158)	(0.157)
DV mean	3.025	3.025	3.025
DV std. dev.	0.974	0.974	0.974
Cohort FE	No	Yes	Yes
Income control	No	No	Yes

Notes: This table shows the correlation between the county-level Gini coefficients in land ownership prior to the Land Reform and today's preference toward inequality. All regressions include province fixed effects. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: all birth cohorts; number of observations = 4,612.

Table A.10: Agricultural vs. non-agricultural occupation

	Non-agricultural occupation				
	(1)	(2)	(3)	(4)	(5)
	Panel A: Both Parents in Agriculture				
Elite class	0.626**	0.690**	0.741***	0.641**	0.626*
	(0.301)	(0.267)	(0.258)	(0.315)	(0.314)
	Panel B: At Least One Parent in Non-agriculture				
Elite class	-0.0575	-0.0560	-0.0520	-0.0581	-0.0635
	(0.048)	(0.048)	(0.047)	(0.048)	(0.049)
County FE	Yes	Yes	Yes	Yes	Yes
Cohort FE	Yes	Yes	Yes	Yes	Yes
Sector FE	No	Yes	No	No	No
Province×Sector FE	No	No	Yes	No	No
Migrants FE	No	No	No	Yes	No
Years of education	No	No	No	No	Yes

Notes: Occupation is defined as the job currently held in 2012 or the last job reported in the CFPS survey. Our sample only includes children with valid occupations reported by both their father and mother. 146 respondents in the children generation reside in households with both their father and mother working in an agricultural occupation (reported in Panel A), and 300 reside in households with at least one parent working in the non-agricultural sector (reported in Panel B). All specifications include cohort fixed effects and county fixed effects. Column 2 additionally includes sector fixed effects; Column 3 includes province×sector fixed effects; Column 4 includes a migrant indicator variable, defining migrants as individuals whose current county of residence is different from their birth place; and Column 5 controls for years of education and variables capturing attitudes and work behavior. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: 1966–1990 birth cohorts.

Table A.11: Attitudes and behaviors: parents vs. children

	Stated attitudes	Behaviors
	(1)	(2)
Panel A: children generation		
Elite class	0.076***	0.595***
	(0.028)	(0.186)
Panel B: parents generation		
Elite class	0.021	0.685***
	(0.024)	(0.154)

Notes: The dependent variables capture work ethics in terms of stated attitudes (whether hard work is critical to success; Column 1) and behaviors (hours worked during workdays; Column 2). The independent variable is a dummy variable equal to 1 if the grandparents' class label is landlord or rich peasant, and 0 otherwise. Panel A reports results for the children generation. Panel B reports results for the parents generation. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: children generation (1966–1990 birth cohorts; number of observations = 9,844) and parents generation (1940–1965 birth cohorts; number of observations = 10,430).

Table A.12: Persistence in income differences and presence of local clan networks

	Total annual labor income				
	(1)	(2)	(3)	(4)	(5)
Elite class	-126.3	-81.0	-125.5	-234.3	-1,154.8
	(1,371.0)	(1,348.3)	(1,331.5)	(1,368.1)	(1,317.2)
Clan presence	1,575.4**	1,628.1**	1,601.3**	1,541.8**	1,595.1**
	(654.0)	(653.3)	(653.3)	(653.6)	(646.3)
Clan presence × Elite	3,018.3*	3,089.5*	3,158.6*	3,163.0*	1,606.3
	(1,768.3)	(1,753.1)	(1,738.7)	(1,763.7)	(1,700.9)
County FE	Yes	Yes	Yes	Yes	Yes
Sector FE	No	Yes	No	No	No
Province×Sector FE	No	No	Yes	No	No
Migrants FE	No	No	No	Yes	No
Control for educ. and values	No	No	No	No	Yes

Notes: Clan presence is a village-level indicator variable equal to 1 if at least 10% of residents in the village have the same last name, and 0 otherwise. All specifications include cohort fixed effects and county fixed effects. Column 2 additionally includes sector fixed effects; Column 3 includes province×sector fixed effects; Column 4 includes a migrant indicator variable, defining migrants as individuals whose current county of residence is different from their birth place; and Column 5 controls for years of education and variables capturing attitudes and work behavior. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: 1966–1990 birth cohorts; 7,818 respondents can be matched to valid clan data in the corresponding village of residence.

Table A.13: Social networks and pre-revolution elite: Spring Festival visits

	Spring Festival visits		
	Total	To relatives	To friends
	(1)	(2)	(3)
Panel A: number of visits			
Elite class	0.834**	0.384**	0.451**
	(0.325)	(0.196)	(0.199)
Panel B: standardized			
Elite class	0.071**	0.055**	0.065**
	(0.028)	(0.028)	(0.029)
County FE	Yes	Yes	Yes
Cohort FE	Yes	Yes	Yes

Notes: Spring Festival visits are defined as the number of families that visited the respondent's household during Chinese New Year. Panel A uses the number of visits as dependent variables; Panel B uses a standardized dependent variable, so that the coefficients can be interpreted in percent of a standard deviation. Column 1 considers all visits; Column 2 focuses on related families, defined as all "blood relations except for lineal descent relatives, such as aunts and uncles"; and Column 3 restricts the analysis to friend families. All specifications include county fixed effects and cohort fixed effects. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: all birth cohorts; number of observations: 21,670.

Table A.14: Social networks and pre-revolution elite: financial help

	Financial help (amount in RMB)			
	(1)	(2)	(3)	(4)
Panel A: From relatives				
Elite class	453.4*	451.2*	470.4*	467.1*
	(257.6)	(257.1)	(257.5)	(256.9)
Panel B: From non-relatives				
Elite class	1.2	0.6	4.1	3.2
	(98.7)	(98.6)	(98.7)	(98.6
County FE	Yes	Yes	Yes	Yes
Cohort FE	Yes	Yes	Yes	Yes
Income	No	Yes	No	Yes
Other controls	No	No	Yes	Yes

Notes: Financial help is defined as the amount (received or given) in RMB exchanged in the past year as financial help and donations. Panel A uses the total amount exchanged with non-coresident relatives, while Panel B focuses on non-relatives. All specifications include county fixed effects and cohort fixed effects. Columns 2 and 4 control for the respondent's income. Columns 3 and 4 additionally control for sector fixed effects, province×sector fixed effects, and an indicator for migrant status. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: all birth cohorts; number of observations: 21,670.

Table A.15: Income difference in the children generation: landlords and rich peasants

	Annual labor income	Total household income
	(1)	(2)
Landlords	1587.3	4577.2***
	(1274.6)	(1704.2)
Rich peasants	1868.6*	3273.4**
	(1084.3)	(1603.2)

Notes: The dependent variable is the annual labor income (Column 1) and total household income (Column 2) in 2010, measured by CFPS. Total household income includes labor market wage incomes, incomes from own business and other private enterprises, pensions, and other transfers, as well as capital income from savings and other financial investments. Landlords and rich peasants are class labels assigned to the households of the children generation prior to the Communist Revolution. The reference category is individuals of the children generation from non-elite households. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Sample: 1966–1990 birth cohorts; number of observations = 9,844.

Table A.16: Land ownership inequality: 1930s vs. 1950s

Panel A: pre-Land Reform					
	Share of land area per landlord (pre-Land Reform)				
	(1)	(2)	(3)	(4)	(5)
Share of land area per owner (1930)	0.078**	0.074*	0.083**	0.082**	0.075**
	(0.037)	(0.040)	(0.039)	(0.039)	(0.036)
# observations	50	50	50	50	41
Panel B: contemporary					
	Gini in 2000 (Amenity-adjusted housing area per capita)				
	(1)	(2)	(3)	(4)	(5)
Average rent (1930)	-0.040	-0.052**	-0.038	-0.038	-0.048
	(0.026)	(0.025)	(0.027)	(0.027)	(0.032)
# observations	123	123	123	123	94
Control for geographic attributes	No	Yes	Yes	Yes	Yes
Control for region FEs	No	No	Yes	Yes	Yes
Control for night light level	No	No	No	Yes	Yes
Control for 2000 GDP	No	No	No	No	Yes

Notes: The land ownership data in 1930 is based on Buck's (1937) agricultural survey. Panel A correlates the share of land area per landlord reported in the gazetteers to the share of land area per landowner reported in Buck (1937). Panel B correlates the amenity-adjusted housing Gini coefficient in 2000 (restricting the sample to counties with at least 20 households in our random 0.1% extract of the Population Census) to the average rent collected by land owners in 1930. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.17: Violence during the Land Reform

	Any report			Number of victims	
	Death	Struggle	Violence	Death	Struggle
	(1)	(2)	(3)	(4)	(5)
Pre-Reform landlord share	0.0013	-0.0003	0.00056	0.0036	0.0008
	(0.002)	(0.002)	(0.0024)	(0.0016)	(0.0027)
Pre-Reform Gini	-0.009	-0.070	-0.020	-0.069	0.109
	(0.051)	(0.075)	(0.079)	(0.083)	(0.071)
# observations	639	639	639	12	23

Notes: The dependent variables capture different types of persecution perpetrated during the Land Reform (death, struggle sessions, and other violence). Columns 1–3 regress indicator variables equal to 1 if any persecution of the specified type is reported in the County Gazetteers, and 0 otherwise, on pre-Land Reform measures of land inequality; Columns 4 and 5 use as dependent variables the percentage of victims of the specified persecution type as a share of total population. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.18: Violence in the 1960s

	Revolutionary casualties		Violence victims	
	(1)	(2)	(3)	(4)
Pre-Reform landlord share	0.037	0.020	0.013	0.008
	(0.043)	(0.043)	(0.048)	(0.047)
Pre-Reform Gini	0.009	0.012	-0.063	-0.077
	(0.045)	(0.044)	(0.050)	(0.049)
Impute zeros	No	Yes	No	Yes
# observations	519	533	519	533

Notes: The dependent variables capture different types of persecutions perpetrated during the Cultural Revolution, using data from Walder and Su (2003). Columns 1 and 2 regress dummies equal to 1 if any persecution of the specified type is reported in the County Gazetteers, and 0 otherwise, on pre-Land Reform measures of land inequality; Columns 3 and 4 use as dependent variable the percentage of victims of the specified persecution type as a share of total population. Columns 2 and 4 report the regression coefficients after imputing missing values as zeros. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.19: Migration in the children generation along pre-revolution elite status

	Migration		
	since birth	since age 3	since age 12
	(1)	(2)	(3)
Elite class	-0.027	0.004	0.003
	(0.017)	(0.005)	(0.007)

Notes: The dependent variables capture individual-level migration: in Column 1 (resp., 2 and 3), it is a dummy equal to 1 if the respondent's current county of residence is different than the one she was living in at birth (resp., at the ages of 3 and 12). Sample: 1966–1990 birth cohorts; number of observations: 9,844. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.20: Migrant selection

	Migration	
	Individual-level (1)	Household-level (2)
Panel A: 2000 Population Census		
College-educated	0.084***	0.059***
	(0.013)	(0.017)
Panel B: 2005 Population Survey		
College-educated	0.090***	0.122***
	(0.006)	(0.011)

Notes: The dependent variables capture individual- (Column 1) and household-level migration (Column 2); they are dummy-coded. An individual is categorized as a migrant if her county of residence is different from her county of registration. A household is categorized as a migrant household if all its members are registered in a different county from the county of residence. The sample is restricted to agricultural *hukou* holders over 25, and we only consider migrants who migrated after 25 (in Column 2, these sample restrictions apply to the household head). All regressions include (the household head's, in Column 2) birth year fixed effects and province of registration fixed effects, and control for sex. Column 2 additionally controls for household size. Panel A uses micro data from our random 0.1% extract of the 2000 Population Census (sample size: 493,743 individuals; 213,972 households). Panel B uses micro data from a 20% extract of the 1% Population Survey of 2005 (sample size: 1,089,004 individuals; 442,372 households). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Appendix A Measures of intergenerational mobility: transition matrix

A.1 Theoretical derivation: the correspondence from transition matrix to regression coefficients

For a transitional matrix,

	Young Top X	Young Bottom 1-X
Old Top X	a	b
Old Bottom 1-X	c	d

We solve b, c, d as functions of a and X first.

$$b = 1 - a$$

$$c = \frac{(1-a)X}{1-X}$$

$$d = 1 - \frac{(1-a)X}{1-X}$$

Consider the following two regressions linking the rank of the young generation to the social status of the old generation. Regression 1: Regress the dummy of being in the top X of the young generation on the dummy of being in the top X of the old generation.

$$D_{young}(Top\ X) = \beta_1 D_{old}(Top\ X) + c + \epsilon$$

The coefficient is the expectation of probability difference of entering in the top X rank.

$$\beta_1 = a - \frac{X}{1-X}(1-a) = \frac{a-X}{1-X}$$

Regression 2: Regress the rank of young generation on the dummy of being in the top X of the old generation.

$$Rank_{young}(TopX) = \beta_2 D_{old}(TopX) + c + \epsilon$$

The coefficient β_2 is the expectation of rank difference. The cohort from top X of the old generation:$a(1 - \frac{X}{2}) + (1-a)\frac{1-X}{2} = \frac{1+a-X}{2}$. The cohort from the bottom $1-X$: $\frac{(1-a)X}{1-X} \times (1 - \frac{X}{2}) + (1 - \frac{(1-a)X}{1-X})\frac{1-X}{2} = \frac{1-X+\frac{X(1-a)}{1-X}}{2}$. The coefficient

$$\beta_2 = \frac{a - \frac{X(1-a)}{1-X}}{2} = \frac{a-X}{2(1-X)}$$

A.2 Empirical implementation

We try to compare our individual-level persistence with the US and Canada. We compute the three-generation decile by decile transition matrix in the US and Canada. There is no data capturing the persistence from grandparents to grandchildren. Thus, we compute the three-generation transition matrix from the parent-child transition matrix.

In the US, we compute the decile by decile parent-child matrix based on the 100×100 matrix

provided by Chetty et al. (2014).[1] Corak and Heisz (1998) report the decile by decile transition matrix with Canadian income tax data.

We further assume that the transmission are independent from generation to generation. Thus, the three-generation matrix M_3 would be simply the squared parent-child matrix M_2:

$$M_3 = M_2^2$$

We reproduce below the three-generation transmission matrix in the US, estimated by Chetty et al. (2014):

	Dec.1	*Dec*.2	*Dec*.3	*Dec*.4	*Dec*.5	*Dec*.6	*Dec*.7	*Dec*.8	*Dec*.9	*Dec*.10
Dec.1	0.1406	0.1191	0.111	0.1055	0.0988	0.0923	0.0871	0.0821	0.0818	0.0815
Dec.2	0.1264	0.1149	0.1095	0.1054	0.1006	0.0955	0.0911	0.0863	0.0856	0.0847
Dec.3	0.1172	0.1112	0.1076	0.1047	0.1013	0.0974	0.0938	0.0898	0.0891	0.0880
Dec.4	0.1094	0.1074	0.1054	0.1036	0.1015	0.0990	0.0964	0.0932	0.0926	0.0916
Dec.5	0.1022	0.1034	0.1029	0.1022	0.1014	0.1002	0.0988	0.0969	0.0964	0.0956
Dec.6	0.0953	0.0991	0.1001	0.1005	0.1010	0.1013	0.1012	0.1008	0.1006	0.1001
Dec.7	0.0882	0.0943	0.0968	0.0985	0.1004	0.1023	0.1038	0.1051	0.1052	0.1053
Dec.8	0.0806	0.0890	0.0930	0.0961	0.0996	0.1033	0.1066	0.1100	0.1105	0.1111
Dec.9	0.0738	0.0839	0.0893	0.0936	0.0986	0.1041	0.1092	0.1148	0.1157	0.1169
Dec.10	0.0663	0.0776	0.0843	0.0900	0.0967	0.1044	0.1120	0.1209	0.1226	0.1252

We reproduce below the three-generation transmission matrix in Canada, estimated by Corak and Heisz (1998):

	Dec.1	*Dec*.2	*Dec*.3	*Dec*.4	*Dec*.5	*Dec*.6	*Dec*.7	*Dec*.8	*Dec*.9	*Dec*.10
Dec.1	0.1117	0.1059	0.1031	0.1003	0.0989	0.0972	0.0963	0.0963	0.0964	0.0967
Dec.2	0.1083	0.1045	0.1025	0.1004	0.0994	0.0979	0.0971	0.0970	0.0968	0.0968
Dec.3	0.1055	0.1035	0.1023	0.1008	0.1000	0.0986	0.098	0.0978	0.0973	0.0970
Dec.4	0.1032	0.1023	0.1017	0.1009	0.1004	0.0995	0.0991	0.0989	0.0985	0.0982
Dec.5	0.1007	0.1009	0.1009	0.1006	0.1004	0.0998	0.0995	0.0994	0.0988	0.0985
Dec.6	0.0988	0.0999	0.1004	0.1006	0.1008	0.1006	0.1005	0.1004	0.0999	0.0998
Dec.7	0.0960	0.0983	0.0995	0.1005	0.1011	0.1013	0.1016	0.1015	0.1011	0.1009
Dec.8	0.0939	0.0967	0.0985	0.1001	0.1011	0.1018	0.1024	0.1025	0.1023	0.1024
Dec.9	0.0911	0.0945	0.0967	0.0991	0.1006	0.1021	0.1034	0.1036	0.1041	0.1045
Dec.10	0.0916	0.0941	0.096	0.0984	0.1001	0.102	0.1038	0.1042	0.1056	0.1069

In the context of rural China and the pre-revolution elite, $X = 10\%$, $a_{Canada,X=10} = 0.1117$ and $a_{US,X=10\%} = 0.1406$. In the US data, we also compute $X = 5$

$$\beta_{1,Canada,X=10\%} = \frac{0.01117}{0.9} = 0.0124$$

$$\beta_{2,Canada,X=10\%} = \frac{0.01117}{1.8} = 0.0062$$

[1]The 100 by 100 transition matrix can be downloaded from the data library of Opportunity Insights. See: *https://opportunityinsights.org/data/*

$$\beta_{1,US,X=10\%} = \frac{0.01406}{0.9} = 0.0156$$

$$\beta_{2,US,X=10\%} = \frac{0.01406}{1.8} = 0.0078$$

$$\beta_{1,US,X=5\%} = \frac{0.0810}{0.95} = 0.0853$$

$$\beta_{2,US,X=5\%} = \frac{0.0117}{1.9} = 0.0426$$