Youth Reeducated: The Economic Preference Impacts of China's Send-Down Movement

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Abstract

We use a new survey data set on Chinese adults, among whom many experienced the send-down movement during their late adolescence and early adulthood, to identify the impact of forced rustication on their economic preferences. To distinguish the effect of being sent down from the effects of confounding factors correlated with the likelihood of send-down and the duration of stay, we exploit a discontinuity in the probability of being sent down resulting from the unanticipated termination of the movement. We find that the send-down experience significantly changed participants' risk preferences, other-regarding preferences, and their attitudes toward government. Individuals that were sent to the countryside are more risk averse, more altruistic, and more likely to return others' kindness. They are also less likely to support redistribution policies or trust the government.

Keywords: send-down movement, economic preferences, China

JEL Classification: D90, J13, O15

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1 Introduction

Economic preferences play a fundamental role in human decision making. A rich literature in psychology and behavioral economics argues that individual life experience and the cultural, political and macroeconomic environment in which individuals grow up have a significant influence on their economic preferences (Falk et al., 2018). The key challenge in any empirical study of the effects of personal experience and environment on preference formation is the appropriate control of omitted variables. For example, unobservable individual characteristics that affect economic preferences may be simultaneously associated with mobility (Alesina and La Ferrara, 2001) or macroeconomic conditions (Malmendier and Nagel, 2011; Giuliano and Spilimbergo, 2014). In this paper, we exploit China's send-down movement as a natural experiment to identify the causal impact of experiences during youth on economic preferences.

The send-down movement was a forced mass rustication movement during the Chinese Cultural Revolution. The movement sent one out of every three urban adolescents to the countryside to perform manual labor and, according to Chairman Mao Zedong, "to be re-educated by the poor farmers." During the 1960s and 1970s, approximately 17 million urban youths (most between ages 16-19) spent from 1 or 2 years to as many as 10 years away from home, exposed to the harsh conditions of rural living and performing hard labor (Li et al., 2010). The mass rustication generated drastic changes in living and working conditions for the sent-down cohort. According to a vast literature in social psychology (in particular, the impressionable years hypothesis), individuals are highly susceptible to changes in attitudes, beliefs and values during late adolescence and early adulthood, while past this critical age susceptibility drops precipitously and remains low throughout the rest of the life cycle (Dennis, 1973; Krosnick and Alwin, 1989; Alwin and Krosnick, 1991; Akbulut-Yuksel et al., 2020). Thus the send-down movement offers a unique opportunity to examine how experiences shape economic preferences.

We conduct a web-based survey to collect information on economic preferences. We measure risk preference, time preference, altruism, positive and negative reciprocity, and trust using questions adapted from the Global Preference Survey (Falk et al., 2015, 2018). Our survey also includes additional questions that measure trust in government, trust in media, redistribution preferences, and attitudes to equality and efficiency. In addition, participants made distributional choices to allow us to evaluated economic rationality (Andreoni and Miller, 2002). We also collect detailed information on demographic and socioeconomic characteristics of the survey participants, such as age, gender, education, income, and family background. In particular, we have information on each individual's birth date and whether

he/she was sent down to the countryside during the send-down movement.

We implement a regression discontinuity (RD) design to estimate the impact of adolescent experience on economic preferences by exploiting variations generated by the send-down movement. The large-scale mandatory send-down movement officially began in 1968. After 1977, the government stopped sending down urban adolescents to the countryside and started arranging for sent-down youths to return to cities. China has school-entry age requirements and the send-down movement generally required urban youths being sent down to first complete junior high school. The school year started on September 1 and finished by the end of June. Students spent six years in primary school, three years in junior high school, and another three years in senior high school (Deng and Treiman, 1997). Therefore, we know that urban youths born in early 1961 had graduated from junior high school by the summer of 1977 and were part of the last cohort being sent down, whereas those born just after the school-entry cutoff date in 1961 were not subject to forced rustication. Our empirical strategy compares the economic preferences of those just above the age cutoff to those also slightly younger individuals who were barely below the age cutoff. Following Angrist and Krueger (1991), we assume that birth date is not correlated with personal attributes other than age at school entry.

We find that the experience of being sent down during late adolescence and early adulthood played an important role in shaping economic preferences. Individuals that were sent down to the countryside during the rustication movement are more risk averse, more altruistic, and more likely to return others' kindness. The sent-down experience also made them less likely to support income redistribution policies and less likely to trust the government. These effects are statistically and economically significant.Note the the interesting juxtaposition of preference effects, in which individual altruism is amplified, whereas altruistic government policies are suppressed, is perhaps not surprising given the result on trust in government. In our empirical analysis, we also examine the heterogeneity in the effect of being sent down on preferences. We find that the economic preference impacts of being sent down when young are similar for individuals of different (current) education and income levels, but that women became more risk averse and less likely to trust the government after being sent down compared to men. If manual labor was particularly hard for young women, then at least part of the send-down effect was amplified by an individual's personal experience.

This paper contributes to the growing literature that links life experiences to economic preferences. Piketty (1995), for example, shows that parents' income shapes their children's income redistribution preferences and voting behavior (see also Alesina and La Ferrara (2001); Di Tella et al. (2007)). Families affect children's religious preferences (Basin

and Verdier, 2000) as well as their risk and trust decisions (Dohmen et al., 2012). Living through the Great Depression made people more risk averse, less optimistic (Malmendier and Nagel, 2011) and more supportive of redistribution (Giuliano and Spilimbergo, 2014). Preferences also differ significantly between countries (Falk et al., 2018). After German reunification East and West Germans have different redistribution preferences (Alesina and Fuchs-Schundeln, 2007) and people who live in democratic government regimes support democracy more (Fuchs-Schundeln and Schundeln, 2015). Traumatic experiences also affect preferences: For example, violence in Afghanistan is associated with risk aversion (Callen et al., 2014), the slave trade caused reduced willingness to trust in Africa (Nunn and Wantchekon, 2011), and policy-induced famine in China led to distrust in government (Chen and Yang, 2015).

Our paper also contributes to the literature on China's send-down movement, taking a novel approach by exploring the impact of the movement on economic preferences. One strand of the existing literature focuses on the effect of the movement on rural areas after the arrival of the urban youths and generally finds a positive impact of the send-down movement on rural development.[1] The other strand of the literature examines how the experience of being sent down affects the sent-down youths' later-life outcomes. People who were sent down have higher rates of chronic illnesses and mental problems (Gong et al., 2020; He, 2018), lower probability of having a successful marriage (He, 2018), and lower participation rate in politics (Shi and Zhang, 2019). At the same time, they are more willing to invest in their children's education (Roland and Yang, 2017). The effects of the send-down experience on education and income are mixed (Xie et al., 2008; Zhou and Hou, 1999). Li et al. (2010) also show that the send-down movement affected intra-household transfers. In two papers closely related to ours, Roland and Yang (2017) and Gong et al. (2017) analyze how being sent to the countryside affected beliefs about whether external circumstances, such as luck, fate and powerful others, or one's own efforts are more important and draw opposite conclusions from the same dataset. We add to the literature on the send-down movement by analyzing its effect on economic preferences, which has received relatively little attention.

The remainder of the paper is organized as follows. In Section 2, we provide some background on China's send-down movement. We discuss why the Chinese government launched the movement, who was sent down, and what the send-down youth experienced while living in rural areas. In Section 3, we describe our survey and data, specify the

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[1]The sent-down urban youths were either junior high school or high school graduates, whereas most of the rural farmers in the 1960s and 1970s were illiterate or had only several years of primary education. The effects of the arrival of the urban educated youths include reducing teacher shortage in rural areas (Deng and Treiman, 1997), increasing rural schooling (Yuan, 2017; Lin, 2019; Chen et al., 2020), facilitating transfers of materials and machinery from urban to rural areas (Honig and Zhao, 2015), as well as improving rural medical care system (Wang, 1999; Rene, 2013).

empirical model, and discuss the identification strategy. We present the main results and several robustness checks in Section 4. Section 5 provides the conclusion.

2   China's Send-Down Movement

The "up to the mountains and down to the countryside movement," often known as the send-down movement, was one of the most intensive political and social mobilizations during the Cultural Revolution (Bernstein, 1977). The chairman of the Chinese Communist Party (CCP), Mao Zedong, launched the 10-year long "Great Proletarian Cultural Revolution" in May 1966 to purge remnants of capitalism and to reimpose his ideology and power with a campaign that relied heavily upon the mobilization of mass support, particularly among youth. Young students formed "Red Guards," who humiliated and tortured anyone suspected of being counter-revolutionary, took over government offices, and destroyed anything regarded as part of the so-called "Four Olds," which included old customs, old culture, old habits, and old ideas (Bridgham, 1967; Heaslet, 1972). The Red Guards' campaign became increasingly violent in 1967 bringing the country into chaos. In addition, urban unemployment rates were high at this time: more than 6 million secondary school students, many of them Red Guards, were out of school and without a job by 1968 (Zhou and Hou, 1999).

Although a small-scale, voluntary send-down movement started in the 1950s, the large-scale send-down movement began in 1967, when some Red Guard students volunteered to go to rural areas to work with peasants. The government endorsed the endeavor (Gu, 1997, p.74). On December 22, 1968, Chairman Mao called for a mass rustication movement to send urban youths to the countryside and made the send-down movement a mandatory state policy.[2] The movement was expected to discharge the Red Guards and restore social order, reduce urban unemployment, and promote rural development (Bernstein, 1977; Pye, 1986; Dietrich, 1997). In addition, the CCP was concerned that pro-bourgeois thinking was prevalent among urban youth, and believed that they would benefit from reeducation by rural workers and farmers that lived in more collectivist communities. Note that reeducation was explicitly ideological rather than academic, as the urban youths had much higher educational attainment than peasants.

The urban youths to be sent down were junior and senior high school graduates, between 16 and 19 years old. Almost all primary, secondary and tertiary level education institutions

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[2]Chairman Mao famously stated in December 1968 that "it is very necessary for the urban educated youth to go to the countryside to be re-educated by the poor farmers." The speech marked the official beginning of the state policy and initiated the large-scale send-down movement.

were closed from 1966-1968 and most tertiary level institutions remained closed until 1972 (Bernstein, 1977; Deng and Treiman, 1997). Even after universities were reopened in 1972, senior high school graduates were not allowed to attend college directly; they had to be sent down first.[3] The send-down movement essentially affected all urban youths: from 1967 to 1978, approximately 17 million urban youths were sent down to the rural areas.

Some urban youths went to the countryside voluntarily because they were inspired by the government propaganda associated with the send-down movement. However, most youths did not want to be separated from their families or give up the better living environment and job opportunities in urban areas. Children from families headed by intellectuals, business-men, landlords, rich peasants, and those with relatives in Taiwan or the United States had priority to be sent down (Bernstein, 1977). In addition to the likelihood of being sent down, the destination to which youths were sent and the duration of send-down experience varied by location and family background. For example, well-connected families might have been able to send their children to rural areas close to their home cities and get them to return cities earlier.[4] Furthermore, in multi-child households not all were sent down, however, we can not assume that this selection was purely random.[5]

For many send-down youths, the rustication experience was traumatic (Liu, 2009; Rene, 2013). In the 1960s and 1970s, there were huge differences in living and working conditions between urban and rural China. Most rural areas had no electricity, running water or basic sanitation facilities. Most of the urban youths, in their late teens and early twenties, had just finished school and had never before lived in a rural area. They were required to perform strenuous physical labor, sometimes under extreme weather conditions and in parasite-infested environments. They often worked for more than 12 hours a day, 7 days a week. They were separated from their families, and some youths were sent to rural areas thousands of miles away from their homes. In many cases, the youths were allowed to visit their families only once every three years for a few weeks (Zhou and Hou, 1999). The lack of cultural and spiritual activities was also a big change from city life. Books were difficult to obtain, and reading and writing were often difficult due to long working hours and lack

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[3]When the universities were reopened in 1972, the major criteria for admission were class background and party loyalty rather than academic achievement. Students from families of workers, peasants, soldiers, and party cadres were desirable. Merit-based college entrance examination was not reestablished until 1977 (Deng and Treiman, 1997; Zhang et al., 2007; Price, 2017).

[4]In the 1950s, the CCP assigned a permanent "class" designation to each family on the basis of the family head's source of income, employment status, and political status in the years just prior to Liberation. Good-class origins included revolutionary cadres and soldiers, industrial workers and poor farmers, whereas bad-class origins included former capitalists, landlords, "rightists" (those who were outspoken and criticized the government in the Hundred Flowers campaign in 1957), and counterrevolutionaries (Unger, 1982, p.13-14). Children from the bad-class origin families were likely more affected by the send-down movement.

[5]As shown by Li et al. (2010), there was also selection to be sent down within households.

of electricity.[6]

The Cultural Revolution came to an end in 1976 after the death of Chairman Mao. The government relaxed enforcement of the send-down policy in 1977 and began arranging for send-down youths to return to cities. High school graduates were allowed to enter universities after college admissions resumed. By 1979, Chairman Mao's successors had completely ended the forced rustication movement and allowed all the affected youths to return to cities. Fewer than one million, or about 5 percent of, send-down youths never returned to the urban areas, often because they married local farmers or found employment in local nonagricultural jobs (Zhou and Hou, 1999).

Forty years after the send-down movement, some participants feel they learned positive lessons such as honesty, integrity, modesty, and the merits of hard work from rural farmers, and value the friendships they formed with other send-down youths (Luo, 2012). However, other participants still believe they lost more than they gained. One specific, frequent complaint is that being sent down caused opportunities for further education to be either delayed or lost, leading some scholars to refer to those that were sent down as "a lost generation" (Roland and Yang, 2017). Since fewer people in this age cohort completed their educations, the development of science and technology in China in the 1980s was slowed (National Bureau of Statistics of PRC, 1999). Wang (1999), on the other hand, argues that the send-down movement postponed, but did not reduce, college education rates for send-down youths, because 90% of them would not have attended college anyway, whereas college expansion after the movement created new opportunities for people to continue their education. It is clear, however, that the send-down movement helped improve basic education in rural areas (Chen et al., 2020). The sent down movement did increase enrollment rates for primary schools in China from 57% in 1963 to 96% in 1976, and rates for junior high school students increased from 2.7 million in 1963 to 23.4 million in 1976 (Ministry of Education of the PRC, 2011).

3 Data and Empirical Strategy

3.1 Data

The data that we use come from our survey, which was carried out by the Virginia Tech Economics Lab using a mobile application operated by the Sojump online platform (http://www.sojump.com) between March and July 2019. Sojump is a service provider in China that engages in online

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[6]A genre of Chinese literature, named "literature of the wounded" (*Shanghen Wenxue*), emerged in the late 1970s and portrayed the sufferings of people during the Cultural Revolution. There were numerous accounts of tragic experiences in the send-down movement.

questionnaire, examination, and voting with a sample library of 2.6 million registered users. It is commonly used by social science researchers to collect survey data in China (Mei and Brown, 2018). The questionnaire was designed by the authors.[7] As only urban youth were eligible to be sent down, we requested Sojump to randomly sample participants that were born with urban household registration (*hukou*).[8] We also restricted survey participation to those born between the years of 1935 and 1985 and oversampled those born between 1960 and 1961 to facilitate our RD design. Sojump randomly contacted 3,000 individuals from their sample library based on the *hukou* and age restrictions requested by the research team via phone call, text message, WeChat (a popular Chinese messaging and social media app) or email and received 2,501 responses, of which 314 were excluded for missing information. An additional 366 observations were excluded because participants were born in rural areas, leaving 1,821 valid responses. Our survey sample has a broad geographic coverage as shown in Figure 1.[9]

Our survey includes questions from other well-known surveys with additional questions we designed. Measures of risk preferences, patience, positive and negative reciprocity, altruism and trust in others were taken from the Global Preferences Survey (GPS) (Falk et al., 2015, 2018). In addition, we measure selfishness and economic rationality (Andreoni and Miller, 2002) and trust in government (Chinese General Social Survey) along with our own measures of trust in media, redistribution preferences and preference for equality versus efficiency. We describe the survey in detail in Appendix A. We also collect detailed information on demographic and socioeconomic characteristics of the survey participants, such as gender, ethnicity, parental occupation, own education and income and whether they were sent down to the countryside during the Cultural Revolution. In particular, we collect information on their birth date both in month and year, which is critical for our identification strategy.

The first two columns of Table 1 present sample summary statistics. The average age of the full sample is 60. Of the 1,821 individuals in the sample, 431 (or roughly 24%) reported having been sent down. The economic preference variables we consider all exhibit large

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[7]Prior to the start of data collection all research procedures were approved by Virginia Tech's Institutional Review Board. Questionnaires were completed online, and all subjects provided informed consent prior to participating. Participants took an average of 32.8 minutes to complete the survey for which they were compensated 22 RMB (about 3 US dollars) or half of the average hourly wage rate of 40 RMB (National Bureau of Statistics, 2018). We paid Sojump 3 RMB per observation for their service.

[8]Under China's household registration (*hukou*) system, individuals born in rural villages are assigned with "rural *hukou*" whereas those born in cities receive "urban *hukou*." Individuals with rural *hukou* may convert their *hukou* status to urban *hukou* through a few channels, such as enrollment in an institution of higher education, recruitment by a state-owned enterprise, or displacement due to state land expropriation, but *hukou* conversion is generally restrictive and difficult (Colas and Ge, 2019).

[9]When we compare the CPS sample to data from the 2010 Chinese census and the 2018 wave of the China Family Panel Studies (CFPS) for the same birth cohorts with urban *hukou*, they have similar demographic and socioeconomic characteristics.

variations in the sample. The proportion of men and women in the sample is almost the same. Approximately 5% of the sample self-identify as ethnic minorities. The majority of sample members' fathers and mothers were workers or peasants. About 8% of the fathers were either revolutionary cadres or soldiers, which had political privilege under the "class" designation, whereas about 11% of the fathers were professionals and businessmen, which were considered bad class origins during the Culture Revolution (Sullivan, 2012). A larger proportion of the mothers belong to an unspecified "others" occupation, which includes those who were not employed.

3.2   Empirical Strategy and Econometric Specification

Our goal is to identify the effects of having been sent-down as an adolescent or young adult on economic preferences. In the event of non-random selection of individuals who were sent down, a simple comparison of the preferences of sent-down individuals to the preferences of those not having been sent down would produce biased results. Although participation in the send-down movement was compulsory, some individuals who were especially sympathetic to the government's goals volunteered to relocate themselves to the countryside, whereas others with privileged families might have avoided being sent down or might have been sent to more desirable rural locations (Zhou and Hou, 1999). In addition, the government allowed families with multiple children to keep one or more children in the city if they already sent children down, and we cannot exclude the possibility that the choice was based on the child's economic preferences, for example, more altruistic children might have been more likely to be sent down. Any of these possibilities would bias the results of analyses based upon ordinary least squares regression analysis.

A small-scale send-down movement started in the early 1960s, and the large scale mandatory send-down movement began in 1967-1968. The government greatly relaxed enforcement of the send-down policy in 1977 and completely ended the send-down movement by 1979. As shown in Figure 2, the number of sent-down youths plummeted after the send-down movement came to an end between 1977-1978. We take advantage of this drop in send-down probability due to the end of the mandatory send-down movement to identify the effect of being sent down on the economic preferences of sent-down youths. The birth cohorts directly affected by the send-down movement were determined by the timing of the policy, as well as school age requirements at the time. From the 1950s to the 1980s, children started school at the age of seven (Gong et al., 2020). Key to our empirical strategy, the youngest cohort affected by the send-down movement were those who graduated from junior high school in 1977, meaning that they were born before September 1, 1961. Those born just after the

school-entry cutoff date on September 1, 1961 had not graduated from junior high school in the summer of 1977 and therefore were either not subject to the movement or had a much lower probability of being sent down.[10] The last two columns of Table 1 present the summary statistics for the age cohorts eligible to be sent down, that is, those born before September 1, 1961 cutoff. Not surprisingly, sample members in the eligible cohorts are older (average age of 65 vs. 60) and have a much higher probability of having been sent down (36.9% vs. 23.7%) compared to the full sample.

Figure 3 summarizes the empirical strategy for this RD design in date of birth. The horizontal axis shows the birth date, with a vertical line at the September 1, 1961 cutoff. The graph plots the proportion of individuals in our sample in each birth-quarter bin who were sent down.[11] The solid lines are the local linear fits for each side of the cutoff, and the dashed lines mark the 95% confidence intervals. The figure confirms that the large-scale forced send-down movement was enforced on the cohorts born before September 1, 1961. While almost no individuals born after the cutoff (hereafter, "control group") were sent down, between 20 to 50 percent of those born immediately before the cutoff ("treatment group") had the send-down experience. The birth date cutoff generates a more than 30 percentage points discontinuity in the likelihood of being sent down.

Since there are untreated observations on both sides of the cutoff, we adapt a fuzzy RD design to identify the causal effects of the send-down experience on individuals' economic preferences. The fuzzy RD design has the interpretation of instrumental variable (IV) estimation (Hahn et al., 2001; Lee and Lemieux, 2010). Based on the empirical strategy outlined above, we use having a birth date before the September 1, 1961 cutoff as an instrument for send-down status and implement a two-stage least square (2SLS) regression. The first-stage equation for our linear probability model is given by:

$$Send\_down_i = \alpha_1 + \beta_1 \times Pre_i + \gamma_1 \times f(QOB_i) + \kappa_1 \times Pre_i \times f(QOB_i) + X_i + u_i, \quad (1)$$

where $Send\_down_i$ is a dummy on whether the individual was sent down during the forced

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[10]The start and end of the large-scale forced send-down movement were both unanticipated shocks to most people. We explore the birth cohort cutoff caused by the end of the send-down movement rather than the start of the movement. The oldest cohort affected by the start of the large-scale send-down movement were those who graduated from senior high school in 1966 or those born in late 1946. However, the cutoff point generated by the start of the movement suffers a severe confounding effect of college entrance suspension at the early stage of the Cultural Revolution (Li and Meng, 2017; Shi and Zhang, 2019). Furthermore, because of the small-scale voluntary send-down movement, a significant number of urban youths born in early 1940s were also sent down. As a result, we observe less sharp discontinuity in send-down probability exploring the beginning of the movement.

[11]Given the September 1st cutoff and as in Gong et al. (2020), we sort individuals into four birth-quarter bins in each year. The first bin contains those born between September and November, the second between December and February, the third between March and May, and the fourth between June and August.

rustication movement, Pre_i is a dummy for birth date before the September 1, 1961 cutoff, and QOB_i is the quarter of birth running variable. The causal relationship of interest is the effect of send-down experience on economic preferences:

$$Y_i = \alpha_2 + \beta_2 \times Send\_down_i + \gamma_2 \times g(QOB_i) + \kappa_2 \times Pre_i \times g(QOB_i) + X_i + \epsilon_i, \quad (2)$$

where Y_i is the economic preferences for individual i. $f(.)$ and $g(.)$ are smooth functions of the running variable QOB_i, which control for the direct effect of birth cohort on economic preferences, and we allow cohort trend to differ across the cutoff point. The covariates in X_i include gender, minority status, father and mother's occupations, and quarter of birth fixed effects. Gelman and Imbens (2019) suggest that low-order local polynomials are preferred in RD designs because global high-order polynomials may lead to noisy estimates, sensitivity to the degree of the polynomial, and poor coverage of confidence intervals. Thus, we estimate Equations (1) and (2) by assuming local linear and local quadratic functional forms for $f(.)$ and $g(.)$.[12] A triangle kernel weight suggested by Imbens and Lemieux (2008) is used in the nonparametric estimations. We cluster standard errors at the birth quarter level.

3.3 Validity of the RD Design

We use the discontinuity in birth date to identify the effect of send-down experience on economic preferences. The key identifying assumptions of the RD design are that assignment to the treatment is as good as random around the cutoff and the outcome variable is counterfactually smooth across the cutoff.

One potential concern is that parents might have manipulated the timing of their children's births. In our case, it is reasonable to believe that people would not have known in 1961 that there would be a surge in the mandatory send-down movement in 1968 and a sudden end of the movement in 1977, meaning that parents could not have deliberately timed the birth of children as to avoid having them sent down. Additionally, as cesarean sections were not widely available at the time, it would have been very difficult to manipulate the exact timing of childbirth. Although it is reasonable to treat birth dates relative to the cutoff as random, we conduct a formal validity check nevertheless. We implement a manipulation test based on density discontinuity proposed by Cattaneo et al. (2018) and find that the P-value of the densities of the birth cohorts across the cutoff is 0.2518, so we fail to reject the null hypothesis that there is no birth manipulation at the cutoff point. This is consistent with our belief that it was very unlikely that parents strategically timed their

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[12]We have also tried the parametric polynomials across different orders as alternative specifications, and the estimated results are very similar.

children's birth dates, since it was hard to know that the send-down movement was coming more than 5 years later and ended more than 15 years later.

We also examine the validity of the RD design by checking whether the predetermined variables are smoothly distributed around the cutoff point. We consider gender, minority status, father's occupation, and mother's occupation. Figure 4 shows the distribution and local linear fit of these predetermined variables. We see no clear jumps in any of these variables around the cutoff. Next, we run RD regressions by using these predetermined variables as dependent variables to test whether the instrument predicts their changes around the cutoff:

$$X_i = \alpha_0 + \beta_0 \times Pre_i + \gamma_0 \times h(QOB_i) + \kappa_0 \times Pre_i \times h(QOB_i) + v_i, \qquad (3)$$

where X_i is a predetermined covariate for individual i. Table 2 presents the covariate balance tests. The sample is individuals in the CPS sample with a birthday around September 1, 1961 cutoff. We use a 20-quarter bandwidth on each side; this sample includes 867 individuals. As shown in Table 2, all covariates are balanced at the cutoff under the local linear specification. The dummy variable on minority status is not smooth at the cutoff under the local quadratic specification. People born before the cutoff is estimated to be less likely to be ethnic minority. Under both specifications, the joint F-test fails to reject the null hypothesis of covariate balance.

In addition, our RD specification might be invalid if there are confounding changes around the cutoff that had a discontinuous effect on people born on different sides of the cutoff. First, a possible confounding factor is the Cultural Revolution, which occurred between 1966 and 1976, resulting in many changes in society. However, its effects are not discontinuous. While cohorts born before and after our cutoff experienced the Cultural Revolution at different ages, for example, those born in 1960 and 1961 were 6 and 5 years old, respectively, when the Cultural Revolution occurred, it is reasonable to believe the influence of the Cultural Revolution is continuous across cohorts similar in age. By controlling for the linear cohort trend, therefore, we can control for the potential influence of the Cultural Revolution.

A second possible confounding factor is the closure of all schools from 1966 to 1967. However, the cohorts around the cutoff were not affected by the closure of schools. After October 1967, the schools reopened and allowed students to resume schooling. The cohorts around September 1961 were not affected by the school closure since in 1966 they had not yet reached schooling age. Thus, their education before being sent down was not disrupted by the school closure.

A third possible confounding factor is college entrance suspension. The cohorts around

the cutoff were not affected by the entrance suspension. At the start of the Cultural Revolution, the college entrance examination was stopped, and there was almost zero college enrollment between 1966 and 1969. In 1970, a small number of universities were allowed to resume enrolling students through recommendations rather than test-based examinations, and this practice was carried out nationwide after 1972. After 1977, the national college entrance examination was resumed (Deng and Treiman, 1997; Zhang et al., 2007; Price, 2017). Therefore, people who graduated from senior high school in 1976 or earlier and people who graduated in 1977 or later may have had different opportunities for college education (Roland and Yang, 2017). This corresponds to the cutoff of September 1958, which is much earlier than the cutoff age for being sent down, September 1961. Thus, it is reasonable to believe that there would be no systematic difference in college education between cohorts born before and after September 1961.

4   Empirical Results

4.1   Baseline Results

We estimate Equation (2) on the sample born within 20 quarters of the September 1, 1961 cutoff. We instrument the variable on send-down experience by Pre_i, a dummy for birth date before the birth cutoff. Figure 3 provides a visual presentation of our first-stage results. The figure shows that the birth date cutoff generates a more than 30 percentage points discontinuity in the likelihood of being sent down. Corresponding to the discontinuity in send-down probability, Figure 5 repeats the graphical exercises by plotting economic preferences against quarter of birth and reveals a discernible change in positive reciprocity, trust government, and redistribution preference around the cutoff but not in other preference variables.

Next we turn to the discussion of regression results. For comparison purposes, Appendix Table B1 reports the simple OLS estimates of the association between send-down experience and economic preferences. We use the same sample that were born within 20 quarters of the birth cutoff so that the estimates are comparable. According to the estimates in the Table B1, the send-down individuals are different from individuals without any send-down experience in patience, positive reciprocity, negative reciprocity, altruism, trust others' intentions, trust government, trust media, and redistribution preference, and preference for equality versus efficiency (column 1), but some of the differences including those in trust others' intentions, trust government, trust media, and preference for equality versus efficiency become statistically insignificant when we control for gender, minority status and parental occupations (column 2). However, as we have discussed before, the OLS estimates might be

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biased due to self-selection. For example, more altruistic individuals might volunteer to be sent down to help rural people.

To measure the causal effect of the send-down movement, we take advantage of the RD design to estimate the effect of send-down experience on individual preferences and report the regression results in Table 3 and Table 4. Table 3 reports the reduced form estimates on the effects of born before the September 1, 1961 cutoff on the economic preference variables. More specifically, we regress the twelve measures of economic preferences from the CPS on the dummy variable Pre_i. We report in the table estimates for both local linear and local quadratic regressions and for specifications with and without controlling for individual characteristics on gender, minority status and parental occupations. We find that individuals born before the September 1, 1961 cutoff exhibit statistically significant higher positive reciprocity, lower trust for the government and lower redistribution preference under local linear specification (columns 1 and 2). When we use the local quadratic specification, the cohort eligible for being sent down also appears to higher risk aversion, lower preference for equality versus efficiency, and lower selfishness (columns 3 and 4). All the estimates are robust when we include controls for individual observed characteristics.

Table 4 reports the 2SLS estimates from the fuzzy RD design using Equations (1) and (2). The bottom panel presents the first-stage estimation results with the status of being sent down as dependent variable while controlling for the quarter of birth trends on both sides of the cutoff and quarter of birth fixed effects. In all columns, the instrument is positive and statistically significant. Being born before the cutoff is shown to have led to a 44 to 56 percentage points higher probability of having been sent down. In all specifications, the F-statistics for the IV are large, thereby suggesting that the IV has a high explanatory power for the endogenous variable.

The top panel of Table 4 presents our main estimates on the effects of send-down experience on economic preferences. The send-down status is first predicted using the birth cutoff and other control variables. In column 1 of Table 4, we report estimation results from local linear regressions with only the quarter of birth trend, its interaction with the cutoff, and quarter of birth fixed effects as controls. The send-down experience has a significantly positive effect on risk aversion, positive reciprocity, and altruism, a significantly negative effect on people's trust in government, redistribution preference, preference for equality relative to efficiency, and selfishness, and a statistically insignificant effect on patience, negative reciprocity, trust others' intentions, trust in media, and economic rationality. Column 5 of the table presents the mean values of the economic preference variables for people in the control group, that is, those born after the birth cutoff. A comparison between the estimated coefficients in column 1 and the control means in column 5 indicate that the effects of

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the send-down experience on individual economic preferences on risk aversion, positive reci-procity, altruism, trust government, redistribution preference, preference on equality versus efficiency and selfishness are not only statistically significant, but also economically signif-icant. For example, the average risk aversion index for those born after the birth cutoff is equal to 0.092, and the send-down experience is estimated to increase the risk aversion index by 0.278. When we include additional controls for individual characteristics on gender, mi-nority status and parental occupations in column 2, the coefficient estimates are quite similar to those in column 1, except that the estimate on patience becomes statistically significant whereas the estimate becomes statistically insignificant for selfishness. Columns 3 and 4 present the estimates from a local quadratic specification with and without controlling for individual characteristics. The overall results remain robust. We find that the send-down experience has a statistically significant positive effect on risk aversion, positive reciprocity and altruism and a significantly negative effect on trust for government and redistribution preference in all specifications.[13]

4.2 Robustness Checks

We undertake several robustness checks to examine the validity of our discontinuity esti-mates. First, our RD estimates, if credible, should remain consistent to different choices of the bandwidth size (Lee and Lemieux, 2010). In our baseline estimates, we choose a bandwidth of 20 quarters on both sides of the birth cutoff, or 120 months. In Table 5, we explore the robustness of the estimation results to alternative bandwidth choice. We follow the mean square error (MSE)-optimal method proposed by Calonico et al. (2014) to choose optimal bandwidth in all regressions on every measure of economic preferences. Again, we consider both local linear and local quadratic specifications without and with individual control variables. Depending on the outcome variable for a specific economic preference and model specification, the optimal bandwidth ranges from approximately 70 to 170 months. We show that the coefficients on send-down experience are very stable when we use the alternative optimal bandwidths in all specifications. The coefficient estimates on send-down

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[13]The RD estimates on trust government and redistribution preference have opposite signs comparing with the OLS estimates. OLS results show that the send-down individuals are more likely to trust government and support redistribution policy, whereas the RD estimates show that the send-down movement has made individuals less likely to trust government and support redistribution policy. These differences may be ex-plained by the fact that youths with revolutionary ideals were more likely to volunteer to relocate themselves to the countryside (Zhang et al., 2007; Zhou and Hou, 1999). The individuals who trust government and support redistribution policy more might have been more likely to participate in the send-down movement. This suggests that statistical bias may provide an explanation for why several previous studies (Zhou and Hou, 1999) showed the send-down individuals trust government more whereas others (Harmel and Yeh, 2016; He, 2018) showed they trust government less.

status for risk aversion, positive reciprocity, altruism, trust government, redistribution preference, preference for equality versus efficiency, and selfishness remain sizable, statistically significant, and similar in magnitude to those reported in Table 4.[14]

Next, we check the robustness of our estimates by using an alternative measure for send-down experience. Thus far, we have used a binary variable on whether an individual was ever sent down to characterize the send-down experience. It is reasonable to believe that how much a person was affected may also depend on how long he/she stayed in the countryside. Hence, we use time spent in the countryside during the send-down movement as an alternative measure for send-down experience and conduct the same RD regressions as before. For those who were sent down in our sample, the send-down duration varies from less than a year up to 10 years and the average is 4.4 years. The results using send-down duration are reported in Table 6. The bottom panel presents the first-stage estimation results with send-down duration as dependent variable. In all columns, the instrument is positive and statistically significant. Being born before the cutoff is shown to have led to 2.4 to 3 years longer period of having been sent down. In the top panel of Table 6, the coefficients on risk aversion, positive reciprocity, altruism, trust government, redistribution preference, preference for equality versus efficiency and selfishness all have the same signs and significance as those from the baseline estimates presented in Table 4, which provide evidence that the longer individuals were sent down, the more their preferences changed. The estimated coefficients on send-down duration in Table 6 captures the average effects of each additional year having been sent down whereas the estimated coefficients on the binary variable on send-down experience in Table 4 measure the average effects of the entire time spent in the countryside during the send-down movement. As expected, the former effects are smaller than the latter effects.

One purpose of the send-down movement was to discharge the Red Guards during the Cultural Revolution to relieve violence and chaos in cities as well as urban unemployment. Therefore, a potential concern is that our findings could be driven by experiencing or escaping from violence and chaos in cities during the first few years of the Cultural Revolution rather than by the send-down experience itself. To control for the potential influence of city violence, we adopt the strategy of Bai and Wu (2017) and construct a province-level measure for city violence by dividing the number of victims of violence during the Cultural Revolution, obtained from the China Political Events Dataset, 1966–1971 (Walder, 2017), by

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[14]In Appendix Table B2, we test the sensitivity of our estimates to the kernel function specification. We use the Epanechnikov kernel function suggested by Calonico et al. (2017) as an alternative to the common triangular kernel function used in our baseline estimates. The main results remain robust and consistent except that the coefficients on send-down status for altruism and selfishness become statistically insignificant under local linear specifications.

total population in each province in 1964. Column 1 of Table 7 reports the estimated effect of city violence in one's province during the cultural revolution on an individual's economic preferences. We find that higher city violence is associated with significantly lower positive reciprocity, altruism, trust in government, and redistribution preference. In the next four columns of Table 7, we explore whether the estimated effects of send-down experience on economic preferences are affected by city violence. We do this by adding the level of city violence as an additional control variable in Equation (2). We find that the estimated effects of send-down experience on all economic preferences are very similar to our baseline estimates, suggesting that our results are robust to including the impact of city violence.

Another possible confounding historical event is China's great famine between 1959 to 1961, which has an estimated death toll due to starvation that ranges in the tens of millions (Smil, 1999; Meng et al., 2015). It has been shown that the great famine caused serious health and economic consequences for the survivors, especially for those with in-utero and early childhood exposure to famine (Chen and Zhou, 2007; Meng and Qian, 2009). Some individuals in our sample were exposed to this tragic event. To control for the influence of the great famine, we construct a province-level severity of the famine following Meng et al. (2015) by using the birth cohort sizes of survivors observed in 1990 census as a proxy for famine severity. In particular, we define local famine severity as one minus the ratio of the cohort size of the famine cohorts (1959-1961) over that of the non-famine cohorts (1955-1957) (Chen et al., 2020). Table 8 uses a structure that mirrors that of Table 7 to investigate whether our results are sensitive to the inclusion of great famine effects. The famine may affect survivors' economic preferences directly through a scarring effect from a negative shock. It would also affect economic preferences through a selection effect if the survivors, who were presumably healthier, have systematically different economic preferences than non-survivors. Column 1 of Table 8 shows that local famine severity is associated with significantly lower risk aversion and preference for equality versus efficiency and higher negative reciprocity. When including local famine severity as an additional control in our main specifications in the last four columns of Table 8, we find that our estimates are robust with respect to the great famine.

The send-down experience may significantly affect people's labor market outcomes, causing the observed changes in economic preferences. To check the feasibility of this hypothesis, we investigate the effect of send-down experience on education and income. In our CPS survey, we collect information on individual education and annual income.[15] Table 9 reports

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[15]Education is measured by highest degree completed, which includes illiterate, elementary school, middle school, high school, some college, college graduate, and post graduate. Income is reported in six intervals, which are: less than 5,000 RMB; 5,000-10,000 RMB; 10,000-50,000 RMB; 50,000-100,000 RMB; 100,000-5000,000 RMB; and more than 500,000 RMB. In 2019, one RMB was approximately 0.145 U.S. dollars.

RD estimates of the effects of send-down on education and income. While the send-down experience seems to have increased the probability of finishing high school and decreased the probability of going to college under the local quadratic specification, the results are not robust with respect to alternative specification. We do not find significant effects of send-down on individual income. In Table 10, we include education (columns 1-2), income (columns 3-4), and both (columns 5-6) as additional control variables in our main RD specifications and find that our estimates of the effects of send-down experience on economic preferences are robust with respect to the inclusion of education and income.

4.3   Heterogeneous Effects of Send-Down Experience

In this section, we attempt to extend our analysis to see whether there are any differential effects of the send-down experience across individuals. First, we explore the gender differences. The harsh living and working conditions in most rural areas, the strenuous physical labor requirements, and the separation from family members for the send-down youths may have been particularly difficult for young women. The first two columns of Table 11 report the regression discontinuity estimates of the effects of send-down experience on economic preferences for females (column 1) and males (column 2), respectively. These estimates come from a local linear specification while results from a local quadratic specification are similar. Column 3 presents the p-values when we compare the differences between the estimates by gender. The results show that the send-down experience generally has a larger impact on some economic preferences of females. In particular, the send-down experience has a large and statistically significant effect on female's risk aversion and trust for government but has no effect on male's risk aversion or trust for government, and these gender differences are statistically significant. The point estimates of the effects of send-down on positive reciprocity and redistribution preference are both greater for females, although the differences are not statistically significant. The effects of send-down on altruism, preference for equality versus efficiency and selfishness are statically significant only for females, but the estimated gender differences are not statistically different from zero.

In the last three columns of Table 11, we examine whether the effects of the send-down experience on economic preferences vary among individuals from different family backgrounds. It is widely believed that children of cadres or well-connected families were likely less affected by the send-down movement. They might have been able to find ways to escape from being sent down or to get sent to better locations (for example, places close to their home cities). In columns 4 and 5 of Table 11, we present the effects of the send-down experience for individuals from privileged and non-privileged family background, respectively, where privileged

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family background refers to either the individual's father or mother was a military officer or party leader. Similar to the estimates by gender, we report estimates from a local linear specification while results from a local quadratic specification are very similar. We find that send-down experience had significantly positive effects on risk aversion, positive reciprocity and altruism and significantly negative effects on trust government, distribution preference, and preference for equality versus efficiency for individuals from non-privileged family background. However, for those from privileged family background, the effects of send-down on risk aversion, altruism, trust government, and preference for equality versus efficiency are not statistically different from zero. The other notable difference is that the send-down experience had made those from privileged family background less patient whereas it had no effect on those from non-privileged family background.

4.4 Discussion

Our results show that the send-down experiences significantly change people's economic preferences. It makes people become more risk averse and altruistic. The send-down individuals are also more willing to return others' kindness. However they are less likely to trust government and support income redistribution policy. Having established that the send-down experience has a significant effect on economic preference, we now turn to a discussion of underlying mechanisms.

The send-down experiences can be regarded as a historical trauma, which would make people become more risk averse (Kim and Lee, 2014). Why are the send-down persons more altruistic? There are two possible explanations. First, increased altruism, or collective preferences, were a goal of the send-down movement; hence, people who were send-down received more education on the importance of altruism. They were only allowed to read books that taught people to be pro-socialism and altruistic. The other reason is that life in rural areas requires that people work collectively and support their community in order for the community to prosper. According to Simon (1993), altruistic behavior, wherein people sacrifice their own fitness for the fitness of others, can increase the evolutionary fitness of a society, making it more resiliant to difficulties than a society whose members are more individualistic.

There are two possible reasons why send-down people are more willing to reciprocate others' kindness. The first reason is that the send-down youth had more formal education than rural farmers. Hence, they often worked as teachers, technicians, or physicians while living in rural areas. They received kindness and respect from the local people, which helped them to conquer the hardship they found. It also made them more willing to return this

kindness. The second reason is the same as the case with altruism: positive reciprocity can induce more group loyalty, and group loyalty helps people survive in hard times. Hence, the send-down youths had to return others' kindness to get more help in the future (Zhang et al., 2007; Zhou and Hou, 1999; Yang, 2003). On the other hand, the send-down people support redistribution policy less and trust the government less. This is a likely reaction to the traumatic experience of being send-down by the government against their will.

5 Conclusion

During the send-down movement approximately 17 million urban youths left their homes to spend several years living and working in rural areas. Goals of the movement included solving urban unemployment and developing rural areas, as well as re-educating citizens to have collectivist values consistent with Marxist ideology and communist principles. That the re-education took place during late adolescence and early adulthood is important since that is the time of life when it is easiest to influence the development of beliefs and values. This paper uses the send-down movement in China as a natural experiment to study the impact of a policy that sought to change people's preferences. Our data was obtained by conducting a web-based survey of over 1,800 participants to collect information on economic preferences. We then take advantage of Chinese school-entry age requirements and the sudden end of the send-down movement to compare the economic preferences of those just above the age cutoff who were affected by the send-down movement with those slightly younger individuals who were just below the age cutoff. We use a fuzzy regression discontinuity design to avoid any statistical bias caused by non-random assignment into the send-down program.

Our results show that the send-down experience significantly changes people's economic preferences – preferences that are fundamental to decision making. It made program participants more risk averse and altruistic. Send-down individuals are more willing to return other's kindness. While some of the outcomes were in line with program goals, others were not. We find that people who were sent down are less likely to trust government and support economic redistribution policy. The effects on economic preferences are strong and significant. Whether the program was ultimately successful in achieving its goal of developing more desirable values among urban youths is beyond the scope of this research.

Our work adds to the literature that shows cultural, political and macroeconomic experiences matter in shaping economic preferences. Importantly, we present an example of a government policy that has a consequential effect on preferences decades after the program was suspended. Additionally, while traditional wisdom is that public policies have an important impact only on the external world, our results show that a government policy may

influence citizens' decision making, and that the effects may last for decades. This suggests that before initiating new policies, governments need to carefully consider the unintended consequences, both good and bad, that may occur in the short and long run. This study constitutes a case study of an extreme government policy enacted in a single country, but the fundamental forces that shape economic preferences are likely to be similar. Whether the impacts of government policy and adolescent experience identified in the context of China's send-down movement can help explain the formation of economic preferences responding to different types of government policies, such as mandatory conscription, in other countries remains an important topic for future research.

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Figure 1: The Chinese Preferences Survey Sample Distribution
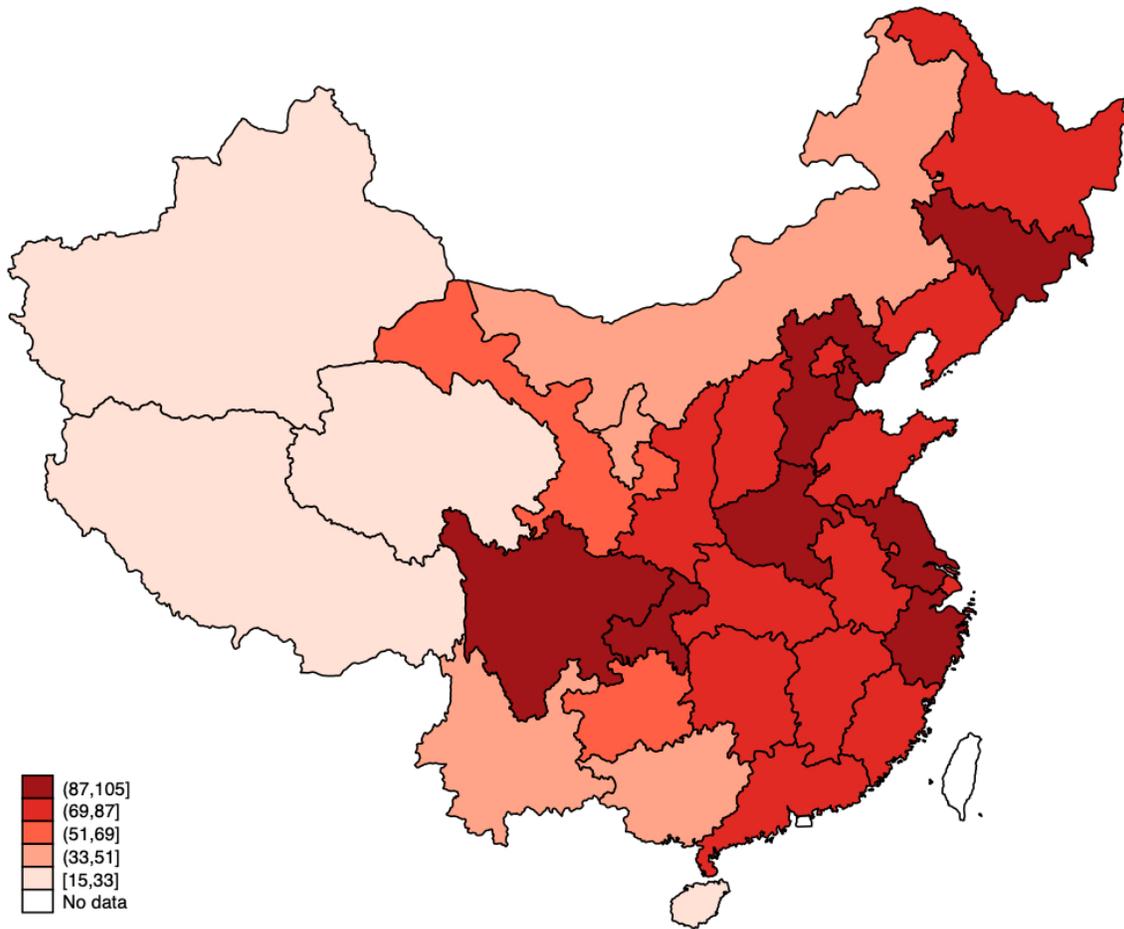
Notes: The Chinese Preferences Survey (CPS) was designed by Virginia Tech Economics Lab and conducted using the Sojump online platform in 2019.

Figure 2: Number of Send-Down Youths, 1962–1980
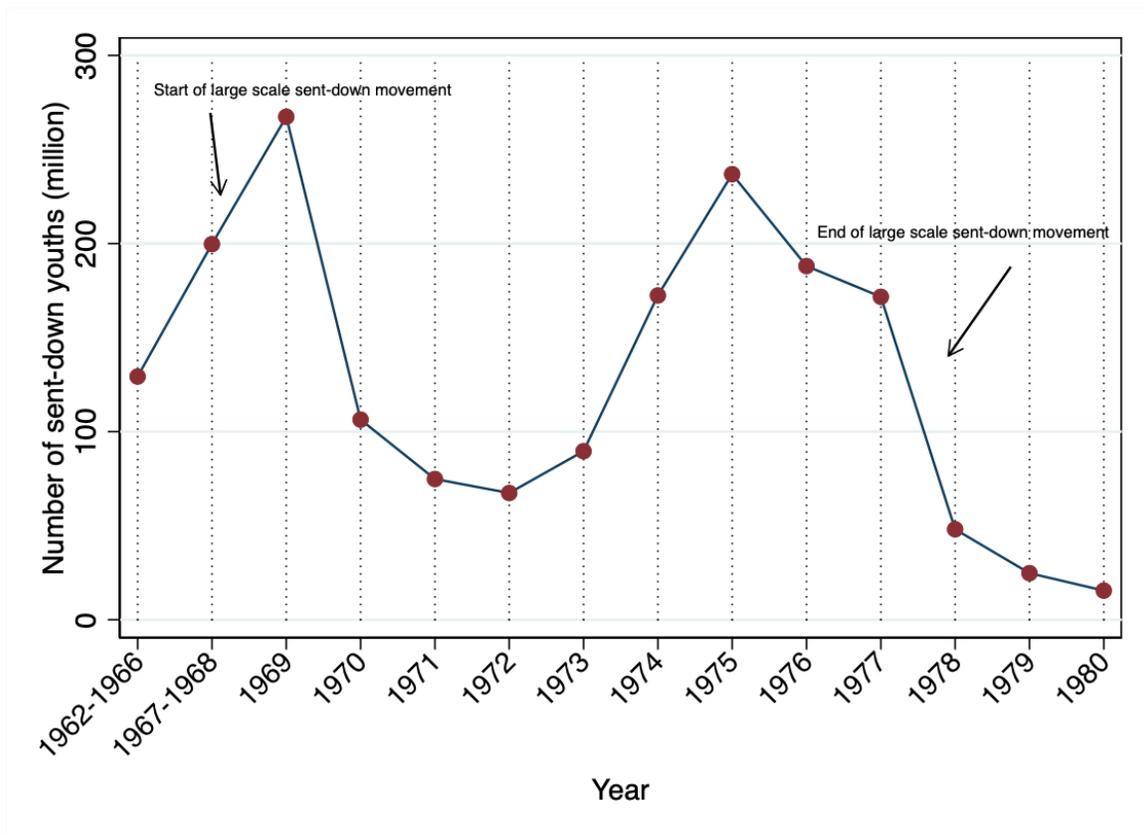
Source: Gu (2009).

Figure 3: Send-Down Probability by Quarter of Birth
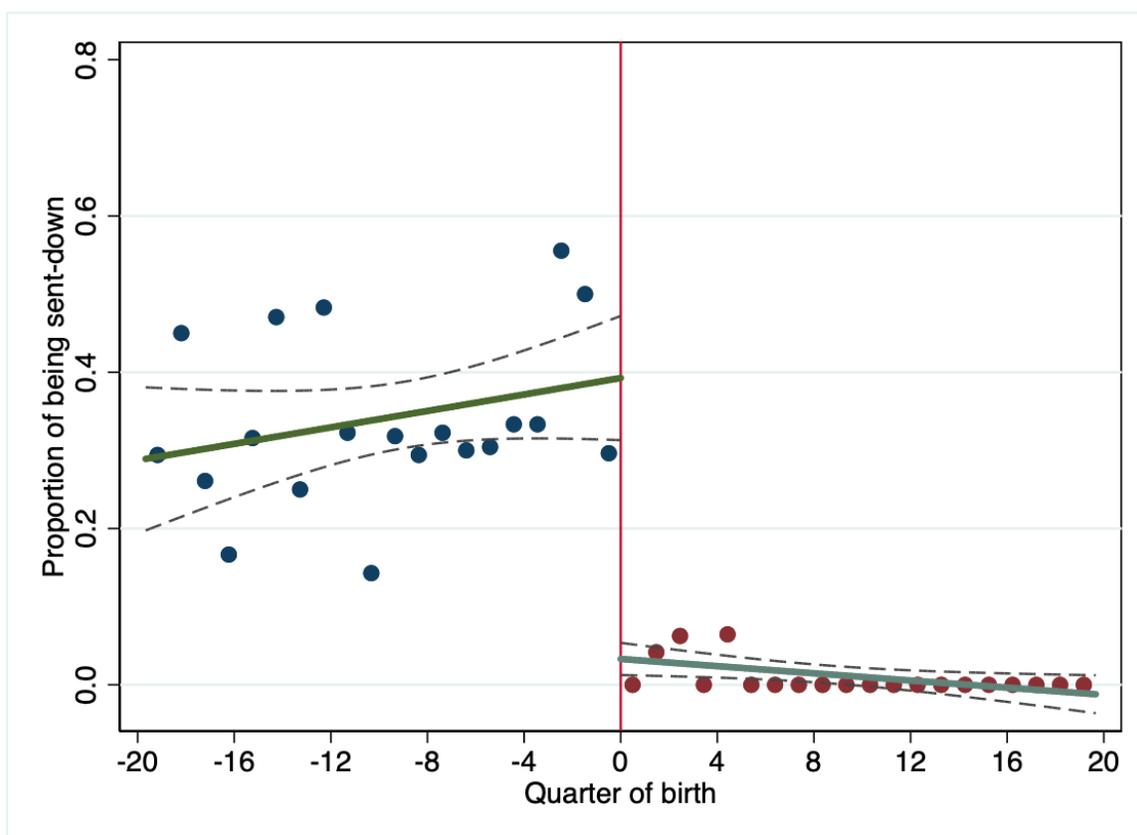
Notes: The vertical line indicates the cutoff birth date at September 1, 1961, which is normalized to 0. The dots represent the proportion of people who were sent down for each birth quarter cohort in the CPS sample. The solid lines are fitted values using local linear regressions, and the dashed lines are the 95 percent confidence intervals.

Figure 4: Distribution of Predetermined Variables
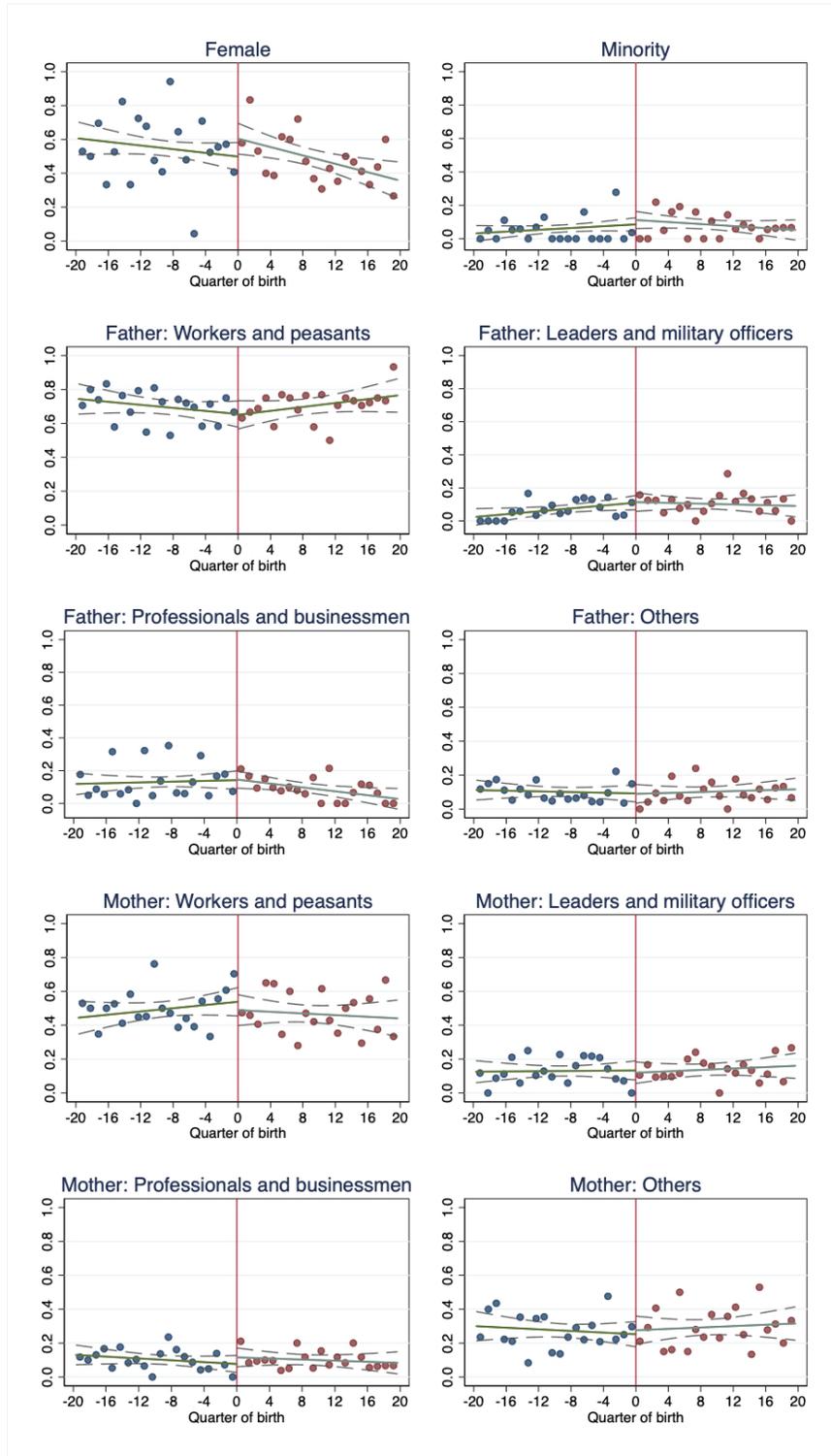
Notes: The vertical lines indicate the cutoff birth date at September 1, 1961, which is normalized to 0. The dots represent the means of predetermined variables for each birth quarter cohort in the CPS sample. The solid lines are fitted values using local linear regressions, and the dashed lines are the 95 percent confidence intervals.

Figure 5: Distribution of Outcome Variables on Economic Preferences

Table 1: Summary Statistics

	Full sample		Eligible cohorts	
	Mean (1)	SD (2)	Mean (3)	SD (4)
Age	60.36	8.160	65.14	5.326
Probability of being sent down(%)	23.67	42.52	36.92	48.28
Preferences				
Risk aversion	0.014	0.474	0.031	0.474
Patience	0.059	0.756	0.130	0.836
Positive reciprocity	0.020	0.763	0.208	0.756
Negative reciprocity	0.008	0.474	-0.014	0.497
Altruism	0.064	0.821	0.272	0.919
Trust others' intentions	0.031	1.027	0.469	0.925
Trust government	0.032	1.031	0.450	0.947
Trust media	0.043	1.025	0.451	0.955
Redistribution preference	0.059	1.058	0.292	1.191
Preference on equality versus efficiency	0.047	1.024	0.206	1.068
Selfishness	-0.017	1.015	-0.219	0.920
Economic rationality	0.982	0.040	0.980	0.041
Predetermined variables				
Female(%)	49.59	50.01	49.65	50.02
Minority(%)	5.38	22.57	4.42	20.56
Father's occupation (%)				
Workers and peasants	70.62	45.56	69.76	45.95
Leaders and military officers	8.46	27.83	7.89	26.96
Professionals and businessmen	11.15	31.48	12.56	33.16
Others	9.77	29.71	9.79	29.73
Mother's occupation (%)				
Workers and peasants	47.72	49.96	48.70	50.00
Leaders and military officers	13.67	34.37	13.43	34.11
Professionals and businessmen	10.32	30.44	10.66	30.87
Others	28.28	45.05	27.21	44.52
No. of observations	1,821		1,154	

Notes: The full sample is the CPS survey respondents that were born between 1935 and 1985 in urban areas. The eligible cohorts include those born before September 1, 1961 and therefore were age eligible to be sent down.

Table 2: Covariate Balance Tests

Variables	Local linear	Local quadratic	Control mean
Female	-0.095	-0.103	0.494
	(0.058)	(0.090)	
Minority	0.012	-0.073**	0.084
	(0.027)	(0.035)	
Father's occupation			
Workers and peasants	0.023	0.062	0.694
	(0.066)	(0.098)	
Leaders and military officers	-0.009	-0.061	0.103
	(0.041)	(0.060)	
Professionals and businessmen	-0.016	-0.054	0.096
	(0.048)	(0.072)	
Others	0.002	0.053	0.106
	(0.040)	(0.058)	
Mother's occupation			
Workers and peasants	0.032	0.110	0.471
	(0.069)	(0.102)	
Leaders and military officers	0.015	-0.036	0.134
	(0.041)	(0.053)	
Professionals and businessmen	-0.016	-0.043	0.099
	(0.039)	(0.056)	
Others	-0.031	-0.031	0.296
	(0.062)	(0.092)	
Observations	1,821	1,821	
Effective observations	867	867	
Joint F-test	3.02	4.86	
p-value	0.933	0.772	

Notes: The table presents covariate balance tests for the local linear and local quadratic RD specifications from Equation (3) with a bandwidth of 20 quarters. All regressions control for dummies for quarter of birth. Control mean denotes the mean values of the predetermined variables for people born after the cut-off. Numbers in the parentheses are standard errors clustered at the birth quarter level. * stands for significance at the 10% level.

Table 3: Reduced-form Estimates

Outcomes	Local linear		Local quadratic		Control Mean
	(1)	(2)	(3)	(4)	(5)
Risk aversion	0.062	0.062	0.201***	0.205***	0.092
	(0.052)	(0.052)	(0.077)	(0.077)	
Patience	-0.052	-0.101	-0.058	-0.114	-0.101
	(0.080)	(0.080)	(0.119)	(0.119)	
Positive reciprocity	0.389***	0.331***	0.447***	0.365***	-0.427
	(0.089)	(0.090)	(0.133)	(0.134)	
Negative reciprocity	-0.076	-0.073	-0.056	-0.050	0.005
	(0.056)	(0.057)	(0.084)	(0.085)	
Altruism	0.060	0.030	0.201	0.169	-0.251
	(0.090)	(0.091)	(0.134)	(0.135)	
Trust others' intentions	-0.049	0.017	-0.054	0.020	-0.712
	(0.089)	(0.089)	(0.132)	(0.132)	
Trust government	-0.233**	-0.173*	-0.365***	-0.291**	-0.678
	(0.090)	(0.090)	(0.134)	(0.134)	
Trust media	-0.098	-0.039	-0.054	0.043	-0.689
	(0.091)	(0.091)	(0.135)	(0.135)	
Redistribution preference	-0.321***	-0.307***	-0.346**	-0.325**	-0.265
	(0.091)	(0.093)	(0.136)	(0.138)	
Equality vs. efficiency	-0.143	-0.114	-0.358**	-0.295*	-0.311
	(0.109)	(0.110)	(0.162)	(0.163)	
Selfishness	-0.081	-0.046	-0.407**	-0.353**	0.170
	(0.115)	(0.115)	(0.170)	(0.171)	
Economic rationality	0.001	0.001	-0.000	-0.001	0.986
	(0.004)	(0.005)	(0.007)	(0.007)	
Covariates	no	yes	no	yes	
Effective observations	867	867	867	867	

 Notes: The table presents reduced-form estimates of the effects of the birth cutoff dummy on economic preferences. Columns 1 and 3 use linear and quadratic regression, respectively. Columns 2 and 4 add gender, minority status, and parental occupations as additional controls. Control mean denotes the mean values of the variables for people born after the cutoff. Numbers in the parentheses are standard errors clustered at the birth quarter level. ***, **, and * stand for significance at the 1%, 5%, and 10% level, respectively.

Table 4: IV Estimates of the Effects of Send-Down Experience on Economic Preferences

Outcomes	Local linear		Local quadratic		Control Mean
	(1)	(2)	(3)	(4)	(5)
Risk aversion	0.278**	0.289**	0.422***	0.458***	0.092
	(0.122)	(0.124)	(0.146)	(0.153)	
Patience	-0.119	-0.219*	-0.224	-0.373**	-0.101
	(0.127)	(0.131)	(0.150)	(0.161)	
Positive reciprocity	0.936***	0.762***	0.677***	0.445**	-0.427
	(0.191)	(0.187)	(0.217)	(0.220)	
Negative reciprocity	-0.159	-0.156	-0.117	-0.113	0.005
	(0.113)	(0.113)	(0.130)	(0.133)	
Altruism	0.265**	0.214*	0.615***	0.610***	-0.251
	(0.122)	(0.122)	(0.155)	(0.160)	
Trust others' intentions	-0.118	0.087	0.098	0.412**	-0.712
	(0.162)	(0.161)	(0.175)	(0.184)	
Trust government	-0.641***	-0.461***	-0.694***	-0.452**	-0.678
	(0.182)	(0.175)	(0.213)	(0.205)	
Trust media	-0.158	0.054	0.173	0.426**	-0.689
	(0.157)	(0.156)	(0.179)	(0.187)	
Redistribution preference	-0.754***	-0.703***	-0.804***	-0.736***	-0.265
	(0.139)	(0.136)	(0.160)	(0.159)	
Equality vs. efficiency	-0.509**	-0.386*	-0.546**	-0.319	-0.311
	(0.222)	(0.217)	(0.264)	(0.256)	
Selfishness	-0.499*	-0.380	-1.199***	-1.057***	0.170
	(0.269)	(0.268)	(0.384)	(0.387)	
Economic rationality	-0.001	-0.003	0.003	-0.001	0.986
	(0.003)	(0.003)	(0.004)	(0.004)	
Covariates	no	yes	no	yes	
Effective observations	867	867	867	867	
First-stage estimates of cutoff effects					
Being sent down	0.449***	0.444***	0.565***	0.549***	0.013
	(0.052)	(0.052)	(0.078)	(0.077)	
F-statistics	68.07	15.06	51.44	14.13	
R-squared	0.19	0.19	0.19	0.19	

Notes: The table presents RD IV estimates of the impact of send-down experience on economic preferences. Send-down experience is measured by a dummy on whether the individual was sent down during the forced rustication movement. In all specifications, we instrument the send-down experience using a dummy for birth date before the September 1, 1961 cutoff, and the bandwidth is 20 quarters. Columns 1 and 3 use local linear and local quadratic RD specifications, respectively. Columns 2 and 4 add gender, minority status, and parental occupations as additional controls. We also report the first-stage coefficients on the birth cutoff dummy and F-statistics in all models. Control mean denotes the mean values of the variables for people born after the cutoff. Numbers in the parentheses are standard errors clustered at the birth quarter level. ***, **, and * stand for significance at the 1%, 5%, and 10% level, respectively.

Table 5: Robustness Check Using Optimal Bandwidth

Outcomes	Local linear		Local quadratic	
	(1)	(2)	(3)	(4)
Risk aversion	0.376***	0.425***	0.400***	0.445***
	(0.136)	(0.145)	(0.139)	(0.149)
Patience	0.007	-0.201	-0.278*	-0.437***
	(0.125)	(0.130)	(0.153)	(0.167)
Positive reciprocity	0.979***	0.770***	0.930***	0.585***
	(0.187)	(0.185)	(0.202)	(0.204)
Negative reciprocity	-0.164	-0.149	-0.170	-0.175
	(0.111)	(0.115)	(0.127)	(0.128)
Altruism	0.260**	0.376***	0.221	0.556***
	(0.121)	(0.130)	(0.136)	(0.158)
Trust others' intentions	-0.116	0.110	0.002	0.517***
	(0.162)	(0.162)	(0.174)	(0.190)
Trust government	-0.640***	-0.459**	-0.937***	-0.711***
	(0.182)	(0.180)	(0.218)	(0.207)
Trust media	-0.163	0.033	-0.068	0.201
	(0.155)	(0.154)	(0.174)	(0.176)
Redistribution preference	-0.755***	-0.699***	-0.790***	-0.732***
	(0.139)	(0.137)	(0.159)	(0.156)
Equality vs. efficiency	-0.553**	-0.409*	-0.680***	-0.544**
	(0.228)	(0.227)	(0.257)	(0.251)
Selfishness	-0.561**	-0.674**	-1.361***	-1.317***
	(0.278)	(0.318)	(0.408)	(0.428)
Economic rationality	-0.001	-0.003	-0.001	-0.003
	(0.003)	(0.004)	(0.004)	(0.004)
Covariates	no	yes	no	yes

Notes: The table presents RD IV estimates of the impact of send-down experience on economic preferences using the optimal bandwidth chosen by the mean square error (MSE)-optimal method (Calonico et al., 2014). In all specifications, we instrument the send-down experience using a dummy for birth date before the September 1, 1961 cutoff, and use the optimal bandwidth. Depending on the outcome variable of specific economic preference and the model specification, the optimal bandwidth ranges from approximately 70 to 180 months. Columns 1 and 3 use local linear and local quadratic RD specifications, respectively. Columns 2 and 4 add gender, minority status, and parental occupations as additional controls. Numbers in the parentheses are standard errors clustered at the birth quarter level. ***, **, and * stand for significance at the 1%, 5%, and 10% level, respectively.

Table 6: Effects of Send-Down Duration on Economic Preferences

Outcomes	Local linear		Local quadratic	
	(1)	(2)	(3)	(4)
Risk aversion	0.051**	0.054**	0.081***	0.090***
	(0.023)	(0.023)	(0.028)	(0.030)
Patience	-0.022	-0.041*	-0.043	-0.074**
	(0.023)	(0.024)	(0.029)	(0.032)
Positive reciprocity	0.172***	0.142***	0.134***	0.088**
	(0.036)	(0.035)	(0.042)	(0.044)
Negative reciprocity	-0.029	-0.029	-0.023	-0.022
	(0.021)	(0.021)	(0.025)	(0.026)
Altruism	0.049**	0.040*	0.118***	0.120***
	(0.023)	(0.023)	(0.032)	(0.034)
Trust others' intentions	-0.022	0.016	0.019	0.081**
	(0.030)	(0.030)	(0.033)	(0.036)
Trust government	-0.117***	-0.086***	-0.133***	-0.089**
	(0.034)	(0.033)	(0.042)	(0.041)
Trust media	-0.029	0.010	0.033	0.084**
	(0.029)	(0.029)	(0.035)	(0.038)
Redistribution preference	-0.138***	-0.131***	-0.154***	-0.145***
	(0.025)	(0.025)	(0.031)	(0.032)
Equality vs. efficiency	-0.093**	-0.072*	-0.105**	-0.063
	(0.041)	(0.041)	(0.052)	(0.051)
Selfishness	-0.092*	-0.071	-0.230***	-0.208***
	(0.049)	(0.050)	(0.074)	(0.077)
Economic rationality	-0.000	-0.001	0.001	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Covariates	no	yes	no	yes
Effective observations	867	867	867	867
	First-stage estimates of cutoff effects			
Send-down duration	2.448***	2.385***	2.940***	2.791***
	(0.293)	(0.290)	(0.442)	(0.437)
F-statistics	68.57	14.75	44.87	13.99
R-squared	0.18	0.19	0.18	0.19

Notes: The table presents RD IV estimates of the impact of send-down duration on economic preferences. Send-down duration is measured by the number of quarters an individual was sent down during the forced rustication movement. In all specifications, we instrument send-down duration using a dummy for birth date before the September 1, 1961 cutoff, and the bandwidth is 20 quarters. Columns 1 and 3 use local linear and local quadratic RD specifications, respectively. Columns 2 and 4 add gender, minority status, and parental occupations as additional controls. We also report the first-stage coefficients on the birth cutoff dummy and F-statistics in all models. Numbers in the parentheses are standard errors clustered at the birth quarter level. ***, **, and * stand for significance at the 1%, 5%, and 10% level, respectively.

Table 7: Robustness Check: Effects of City Violence

Outcomes	OLS	Local linear		Local quadratic	
	(1)	(2)	(3)	(4)	(5)
Risk aversion	1.742	0.280**	0.295**	0.422***	0.459***
	(1.079)	(0.122)	(0.123)	(0.146)	(0.152)
Patience	1.814	-0.113	-0.208	-0.223	-0.368*
	(1.752)	(0.126)	(0.129)	(0.149)	(0.159)
Positive reciprocity	-4.690**	0.930***	0.742***	0.696***	0.439**
	(1.996)	(0.190)	(0.184)	(0.217)	(0.219)
Negative reciprocity	-0.304	-0.158	-0.151	-0.117	-0.111
	(1.174)	(0.113)	(0.112)	(0.130)	(0.133)
Altruism	-5.228**	0.255**	0.194	0.615***	0.601***
	(2.045)	(0.122)	(0.122)	(0.157)	(0.161)
Trust others' intentions	-0.413	-0.112	0.098	0.099	0.415**
	(2.319)	(0.160)	(0.159)	(0.174)	(0.183)
Trust government	-4.440*	-0.655***	-0.485***	-0.695***	-0.461**
	(2.338)	(0.178)	(0.171)	(0.209)	(0.201)
Trust media	2.356	-0.149	0.086	0.174	0.436**
	(2.387)	(0.157)	(0.156)	(0.181)	(0.191)
Redistribution preference	-5.837***	-0.770***	-0.732***	-0.804***	-0.746***
	(2.067)	(0.139)	(0.137)	(0.160)	(0.159)
Equality vs. efficiency	-0.719	-0.510**	-0.382*	-0.546**	-0.317
	(2.353)	(0.222)	(0.215)	(0.264)	(0.255)
Selfishness	1.358	-0.497*	-0.362	-1.199***	-1.047***
	(2.414)	(0.267)	(0.263)	(0.382)	(0.381)
Economic rationality	0.038	-0.000	-0.002	0.003	-0.001
	(0.096)	(0.004)	(0.003)	(0.004)	(0.004)
Covariates	no	no	yes	no	yes
Effective observations	867	867	867	867	867

Notes: This table investigates whether the estimated effects of send-down experience on economic preferences are affected by city violence. Send-down experience is measured by a dummy on whether the individual was sent down during the forced rustication movement. City violence is constructed by dividing the number of victims during the Cultural Revolution, obtained from the China Political Events Dataset, 1966–1971 (Walder, 2017), by total population in each province in 1964. Column 1 reports estimated effects of city violence in one's province during cultural revolution on the individual's economic preferences. In columns 2–5, we add city violence as an additional control variable in our RD regressions. In all specifications in columns 2–5, we instrument the send-down experience using a dummy for birth date before the September 1, 1961 cutoff, and the bandwidth is 20 quarters. Columns 2 and 4 use local linear and local quadratic RD specifications, respectively. Columns 3 and 5 add gender, minority status, and parental occupations as additional controls. Numbers in the parentheses are standard errors clustered at the birth quarter level. ***, **, and * stand for significance at the 1%, 5%, and 10% level, respectively.

Table 8: Robustness Check: Effects of Great Famine

Outcomes	OLS	Local linear		Local quadratic	
	(1)	(2)	(3)	(4)	(5)
Risk aversion	-0.291***	0.276**	0.285**	0.408***	0.445***
	(0.098)	(0.122)	(0.124)	(0.146)	(0.153)
Patience	0.117	-0.121	-0.222*	-0.233	-0.386**
	(0.160)	(0.127)	(0.131)	(0.151)	(0.162)
Positive reciprocity	0.081	0.935***	0.760***	0.687***	0.434*
	(0.183)	(0.192)	(0.187)	(0.219)	(0.222)
Negative reciprocity	0.272**	-0.156	-0.151	-0.099	-0.094
	(0.107)	(0.113)	(0.113)	(0.128)	(0.131)
Altruism	0.257	0.268**	0.218*	0.636***	0.624***
	(0.187)	(0.121)	(0.122)	(0.156)	(0.161)
Trust others' intentions	-0.216	-0.122	0.081	0.076	0.390**
	(0.212)	(0.162)	(0.161)	(0.176)	(0.184)
Trust government	-0.062	-0.645***	-0.468***	-0.718***	-0.478**
	(0.214)	(0.181)	(0.175)	(0.214)	(0.207)
Trust media	-0.035	-0.159	0.053	0.169	0.428**
	(0.218)	(0.157)	(0.156)	(0.180)	(0.188)
Redistribution preference	-0.049	-0.755***	-0.706***	-0.813***	-0.748***
	(0.190)	(0.138)	(0.135)	(0.160)	(0.159)
Equality vs. efficiency	-0.653***	-0.518**	-0.402*	-0.602**	-0.380
	(0.214)	(0.215)	(0.210)	(0.259)	(0.252)
Selfishness	-0.175	-0.502*	-0.383	-1.222***	-1.072***
	(0.220)	(0.267)	(0.268)	(0.385)	(0.388)
Economic rationality	0.005	-0.000	-0.002	0.004	-0.000
	(0.009)	(0.003)	(0.004)	(0.004)	(0.004)
Covariates	no	no	yes	no	yes
Effective observations	867	867	867	867	867

Notes: This table investigates whether the estimated effects of send-down experience on economic preferences are affected by the great famine. Send-down experience is measured by a dummy on whether the individual was sent down during the forced rustication movement. We define local famine severity as the ratio of the cohort size of the famine cohorts (1959-1961) over that of the non-famine cohorts (1955-1957) in one's province. Column 1 reports estimated effects of local famine severity on individual's economic preferences. In columns 2–5, we add local famine severity as an additional control variable in our RD regressions. In all specifications in columns 2–5, we instrument the send-down experience using a dummy for birth date before the September 1, 1961 cutoff, and the bandwidth is 20 quarters. Columns 2 and 4 use local linear and local quadratic RD specifications, respectively. Columns 3 and 5 add gender, minority status, and parental occupations as additional controls. Numbers in the parentheses are standard errors clustered at the birth quarter level. ***, **, and * stand for significance at the 1%, 5%, and 10% level, respectively.

Table 9: Effects of Send-Down Experience on Education and Income

Outcomes	Local linear		Local quadratic	
	(1)	(2)	(3)	(4)
Education level				
Middle school and below	0.111	0.180	-0.198	-0.141
	(0.109)	(0.110)	(0.124)	(0.123)
High school	-0.063	-0.147	0.351***	0.281**
	(0.111)	(0.111)	(0.135)	(0.133)
College and above	-0.048*	-0.033	-0.153***	-0.140***
	(0.027)	(0.027)	(0.038)	(0.038)
Income level				
10,000 RMB and below	0.136	0.170	0.059	0.058
	(0.108)	(0.106)	(0.133)	(0.132)
10,000-100,000 RMB	-0.115	-0.147	0.013	0.022
	(0.111)	(0.106)	(0.139)	(0.135)
100,000 RMB and above	-0.021	-0.024	-0.072	-0.081*
	(0.035)	(0.034)	(0.048)	(0.048)
Covariates	no	yes	no	yes
Effective observations	867	867	867	867

Notes: The table presents RD IV estimates of the impact of send-down experience on education and income. Send-down experience is measured by a dummy on whether the individual was sent down during the forced rustication movement. In all specifications, we instrument the send-down experience using a dummy for birth date before the September 1, 1961 cutoff, and the bandwidth is 20 quarters. Columns 1 and 3 use local linear and local quadratic RD specifications, respectively. Columns 2 and 4 add gender, minority status, and parental occupations as additional controls. Numbers in the parentheses are standard errors clustered at the birth quarter level. ***, **, and * stand for significance at the 1%, 5%, and 10% level, respectively.

Table 10: Robustness Checks: Effects of Education and Income

Outcomes	Include education		Include income		Include both	
	Local linear (1)	Local quadratic (2)	Local linear (3)	Local quadratic (4)	Local linear (5)	Local quadratic (6)
Risk aversion	0.294**	0.476***	0.324**	0.487***	0.325***	0.492***
	(0.124)	(0.154)	(0.126)	(0.153)	(0.125)	(0.153)
Patience	-0.183	-0.296*	-0.225*	-0.376**	-0.194	-0.308**
	(0.130)	(0.156)	(0.132)	(0.160)	(0.130)	(0.156)
Positive reciprocity	0.746***	0.505**	0.771***	0.440**	0.753***	0.498**
	(0.187)	(0.220)	(0.190)	(0.224)	(0.190)	(0.222)
Negative reciprocity	-0.134	-0.119	-0.152	-0.106	-0.132	-0.116
	(0.113)	(0.134)	(0.115)	(0.135)	(0.114)	(0.135)
Altruism	0.225*	0.574***	0.265**	0.615***	0.276**	0.582***
	(0.123)	(0.157)	(0.123)	(0.157)	(0.123)	(0.153)
Trust others' intentions	0.064	0.428**	0.088	0.372**	0.069	0.406**
	(0.160)	(0.184)	(0.164)	(0.185)	(0.162)	(0.184)
Trust government	-0.482***	-0.498**	-0.461***	-0.526***	-0.475***	-0.533***
	(0.176)	(0.207)	(0.172)	(0.201)	(0.172)	(0.200)
Trust media	0.037	0.464**	0.079	0.432**	0.061	0.468**
	(0.156)	(0.189)	(0.157)	(0.185)	(0.157)	(0.186)
Redistribution preference	-0.726***	-0.790***	-0.700***	-0.767***	-0.718***	-0.801***
	(0.137)	(0.163)	(0.138)	(0.163)	(0.139)	(0.165)
Equality vs. efficiency	-0.398*	-0.278	-0.386*	-0.347	-0.397*	-0.296
	(0.217)	(0.253)	(0.220)	(0.260)	(0.220)	(0.254)
Selfishness	-0.480*	-1.026***	-0.483*	-1.128***	-0.571**	-1.066***
	(0.268)	(0.379)	(0.255)	(0.359)	(0.252)	(0.345)
Economic rationality	-0.003	0.000	-0.003	-0.002	-0.003	-0.000
	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Covariates	yes	yes	yes	yes	yes	yes
Effective observations	867	867	867	867	867	867

 Notes: This table investigates whether the estimated effects of send-down experience on economic preferences are affected by education and income. Send-down experience is measured by a dummy on whether the individual was sent down during the forced rustication movement. We instrument the send-down experience using a dummy for birth date before the September 1, 1961 cutoff, and the bandwidth is 20 quarters. All columns have gender, minority status and parental occupations as controls. Columns 1 and 2 include dummies on education levels as additional controls. Columns 3 and 4 include dummies on income levels as additional controls. Columns 5 and 6 include both education and income controls. Numbers in the parentheses are standard errors clustered at the birth quarter level. ***, **, and * stand for significance at the 1%, 5%, and 10% level, respectively.

Table 11: Heterogeneous Effects by Gender and Family Background

	Gender			Family background		
	Female (1)	Male (2)	p-value (3)	Privileged (4)	Non-privileged (5)	p-value (6)
Risk Aversion	0.606***	-0.007	0.012**	0.191	0.330**	0.656
	(0.200)	(0.126)		(0.288)	(0.140)	
Patience	-0.327*	-0.053	0.249	-1.031***	-0.018	0.002***
	(0.175)	(0.158)		(0.313)	(0.144)	
Positive reciprocity	0.966***	0.588***	0.266	1.004**	0.719***	0.566
	(0.281)	(0.176)		(0.500)	(0.217)	
Negative reciprocity	-0.116	-0.154	0.864	-0.233	-0.126	0.699
	(0.186)	(0.110)		(0.232)	(0.127)	
Altruism	0.295*	0.166	0.572	-0.473	0.329**	0.018**
	(0.165)	(0.156)		(0.389)	(0.140)	
Trust others' intentions	0.144	0.166	0.938	-0.674	0.244	0.034*
	(0.224)	(0.163)		(0.470)	(0.184)	
Trust government	-1.118***	0.196	0.000***	-0.520	-0.506**	0.975
	(0.289)	(0.225)		(0.376)	(0.203)	
Trust media	0.145	-0.014	0.572	-0.111	0.116	0.563
	(0.208)	(0.186)		(0.376)	(0.174)	
Redistribution preference	-0.758***	-0.594***	0.542	-0.708*	-0.707***	0.998
	(0.209)	(0.162)		(0.406)	(0.149)	
Equality vs. Efficiency	-0.471*	0.015	0.173	-0.042	-0.445*	0.454
	(0.273)	(0.221)		(0.470)	(0.245)	
Selfishness	-0.733*	-0.024	0.169	-0.157	-0.500	0.642
	(0.384)	(0.336)		(0.828)	(0.308)	
Economic rationality	-0.012**	0.006	0.011**	-0.005	-0.002	0.756
	(0.005)	(0.005)		(0.011)	(0.004)	
Covariates	yes	yes		yes	yes	
Effective observations	456	411		178	689	

Notes: This table investigates the heterogeneous effects of send-down experience on economic preferences by gender and by family background. Send-down experience is measured by a dummy on whether the individual was sent down during the forced rustication movement. We instrument the send-down experience using a dummy for birth date before the September 1, 1961 cutoff, and the bandwidth is 20 quarters. Privileged family background refers to either the individual's father or mother was a military officer or party leader. Columns 1-2 use local linear RD specifications and add minority status and parental occupations as controls; columns 4-5 use local linear RD specifications and add gender and minority status as controls. Columns 3 and 6 present the p-values when we compare the differences between the estimates by gender and by family background, respectively. Numbers in the parentheses are standard errors clustered at the birth quarter level. ***, **, and * stand for significance at the 1%, 5%, and 10% level, respectively.

A   Appendix: Description of The Chinese Preferences Survey Data

The CPS is a comprehensive preferences survey in China. To measure economic preferences important to understanding economic behavior, we utilize the Global Preferences Survey (GPS), a validated instrument which measures both individual preferences (time preference, risk preference) and social preferences (trust, altruism, positive reciprocity, and negative reciprocity(Falk et al., 2015, 2018).The survey on each preference measure consists of one or more qualitative questions (e.g., Please tell me, in general, how willing or unwilling you are to take risks.") and one or more quantitative questions or choice tasks (e.g., What would you prefer: a draw with a 50 percent chance of receiving 300 Yuan, and the same 50 percent chance of receiving nothing, or the amount of 160 Yuan as a sure payment?"). A single index for each preference measure is determined by weighting responses based on weights established by the original GPS model validation procedure (Falk et al., 2015). We include a question on trusting government from the Chinese General Social Survey (CGSS) and a self-designed question on trust in media as compliments to the GPS question on trusting others. Additionally, since economic equality is a communist value, we added an income redistribution question about how much individuals with earnings in the top 1% should be taxed to measure redistribution preference as well as a question on whether economic growth or equality is a more important priority to measure preference on equality versus efficiency. The CPS also includes the economic rationality task from Andreoni and Miller (2002).

The following provides greater detail on our survey questions and variable construction.

1 Questions on risk preferences, patience, positive and negative reciprocity, altruism and trust in others are taken from the Global Preferences Survey (Falk et al., 2015), a survey measurement tool that is validated against data from incentivized laboratory experiments. Variables are constructed following the original study procedures. All of the preferences scores were z-scored to a standard normal distribution. We adopted the Chinese version of the GPS, in which the questions were translated into Chinese and the currency were Chinese Yuan (RMB).

2 Selfishness and economic rationality are measured using a hypothetical, modified dictator game from Andreoni and Miller (2002), where participants make a number of choices about how to divide money between themselves and a charity. Each participant answered 11 questions, each concerning a different budget set that varied in the amount to be divided and the slope of the budget. We use their decision to estimate a CES utility model, which is $U_s = (\alpha \pi_s^\rho + (1-\alpha)\pi_o^\rho)^{\frac{1}{\rho}}$, where $0 < \alpha < 1$ and measures

Table A1: Descriptions of Preference Measures in the CPS Survey

Preferences	Weight*	Source
Risk preference		
Lottery choice task	0.53	GPS
Qualitative survey question	0.47	GPS
Patience		
Inter-temporal choice task	0.71	GPS
Qualitative survey question	0.29	GPS
Positive reciprocity		
Gift exchange task	0.52	GPS
Qualitative survey question	0.48	GPS
Negative reciprocity		
Qualitative survey question	1	GPS
Altruism		
Altruism task	0.54	GPS
Qualitative survey question	0.46	GPS
Trust others' intention		
Qualitative survey question	1	GPS
Trust government		
Qualitative survey question	1	CGSS
Trust media		
Qualitative survey question	1	Our own question
Redistribution preference		
Qualitative survey question	1	Our own question
Preference on equality versus efficiency		
Qualitative survey question	1	Our own question
Selfishness		
Modified dictator game	1	Andreoni and Miller (2002)
Economic rationality		
Modified dictator game	1	Andreoni and Miller (2002)

Notes: The Chinese Preferences Survey (CPS) was designed by Virginia Tech Economics Lab and conducted using the Sojump online platform in 2019. * To measure economic preferences important to understanding economic behavior, we employ questions from the Global Preferences Survey (GPS), a validated instrument which measures both individual preferences (time preference, risk preference) and social preferences (trust, altruism, positive reciprocity, and negative reciprocity (Falk et al., 2015, 2018). The survey for each preference measure consists of one or more qualitative questions (e.g., "Please tell me, in general, how willing or unwilling you are to take risks.") and one or more quantitative questions or choice tasks (e.g., "What would you prefer: a draw with a 50 percent chance of receiving 300 Yuan, and the same 50 percent chance of receiving nothing, or the amount of 160 Yuan as a sure payment?"). A single index for each preference measure is determined by weighting responses based on weights established by the original GPS model validation procedure (Falk et al., 2015).

selfishness. We use the Critical Cost Efficiency Index (CCEI) to measure the severity of GARP violations and use that as a measure of rationality. The selfishness were z-scored to standard normal distribution. We use the same tokens as the original tasks used. The token's value were conversed to RMB according to the 2018 exchange rate between US Dollar and Chinese Yuan.

3 Trust in government is measured using the question from the Chinese General Social Survey "I assume government is trustworthy." Participants responded by selecting an integer from 1-10, where 1 means "totally agree" and 10 means "totally disagree." The results were z-scored to a standard normal distribution.

4 We created the trust in media question "I assume that the media is trustworthy." Participants responded by selecting an integer from 1-10, where 1 means "totally agree" and 10 means "totally disagree." The results were z-scored to a standard normal distribution.

5 To measure redistribution preferences we asked participants "How much do you think each of the following groups should pay as a percentage of their total income" for the top 1%, the top 9%, the bottom 9% and the bottom 1%. In creating our variable we used only answers about tax rates for the top 1%, then z-scored it to a normal distribution with 0 mean and 1 SD.

6 To measure the attitude to equity vs. efficiency. we used question "how would you place your views on the following scale?" (1 = you agree completely with Statement A; 10 = you agree completely with Statement B)

– Statement A: Fast economic growth should be of high priority, even if doing so can lead to increasing inequality.

– Statement B: Equality should be of high priority, even if doing so can lead to slower economic growth.

then z-scored it to a normal distribution with 0 mean and 1 SD.

7 Participants answered 17 demographic questions covering gender, birth date, income, education, whether their current residence is more urban or rural, ethnicity, religion, province, Hukou status now and for their place of birth, occupation of the respondent and both parents, whether the respondent was sent down to the countryside during the Cultural Revolution, and if so, for how long and where, and whether the respondent was an only child.

A summary description of all the economic preference variables in the CPS survey is presented in Table A1. The complete survey in both Chinese and an English Translation is available from the authors on request.

B   Appendix: Additional Tables

Table B1: OLS Estimates

Outcomes	OLS		Control Mean
	(1)	(2)	(3)
Risk aversion	-0.031	-0.001	0.071
	(0.035)	(0.037)	
Patience	0.327***	0.200***	-0.032
	(0.056)	(0.058)	
Positive reciprocity	0.440***	0.266***	-0.243
	(0.063)	(0.065)	
Negative reciprocity	0.110***	0.113***	-0.021
	(0.038)	(0.040)	
Altruism	0.381***	0.162**	-0.063
	(0.066)	(0.066))	
Trust others' intentions	0.442***	0.056	-0.350
	(0.074)	(0.066)	
Trust government	0.450***	0.080	-0.375
	(0.075)	(0.068)	
Trust media	0.445***	0.073	-0.359
	(0.076)	(0.070)	
Redistribution preference	0.342***	0.149**	-0.144
	(0.067)	(0.068)	
Equality vs. efficiency	0.242***	0.082	-0.180
	(0.076)	(0.079)	
Selfishness	-0.099	0.023	0.057
	(0.078)	(0.082)	
Economic rationality	-0.002	-0.002	0.986
	(0.003)	(0.003)	
Covariates	no	yes	
Effective observations	867	867	

Notes: The table presents OLS estimates of the impact of send-down experience on economic preferences. Column 2 includes gender, minority status, and parental occupations as control variables. Control mean denotes the mean values of the variables for people that were sent down. Numbers in the parentheses are standard errors clustered at the birth quarter level. ***, **, and * stand for significance at the 1%, 5%, and 10% level, respectively.

Table B2: Robustness Check Using Alternative Kernal Function

Outcomes	Local linear		Local quadratic	
	(1)	(2)	(3)	(4)
Risk aversion	0.248**	0.251**	0.424***	0.445***
	(0.123)	(0.123)	(0.148)	(0.149)
Patience	-0.096	-0.192	-0.187	-0.437***
	(0.132)	(0.135)	(0.153)	(0.167)
Positive reciprocity	0.983***	0.831***	0.759***	0.585***
	(0.196)	(0.191)	(0.217)	(0.204)
Negative reciprocity	-0.168	-0.157	-0.116	-0.175
	(0.116)	(0.114)	(0.133)	(0.128)
Altruism	0.195	0.138	0.561***	0.556***
	(0.129)	(0.128)	(0.159)	(0.158)
Trust others' intentions	-0.162	0.020	0.050	0.517***
	(0.169)	(0.167)	(0.180)	(0.190)
Trust government	-0.630***	-0.452**	-0.725***	-0.711***
	(0.185)	(0.177)	(0.220)	(0.207)
Trust media	-0.227	-0.020	0.087	0.201
	(0.162)	(0.160)	(0.181)	(0.176)
Redistribution preference	-0.754***	-0.694***	-0.783***	-0.732***
	(0.139)	(0.143)	(0.165)	(0.156)
Equality vs. efficiency	-0.501**	-0.405*	-0.618**	-0.544**
	(0.227)	(0.222)	(0.268)	(0.251)
Selfishness	-0.356	-0.250	-1.081***	-1.317***
	(0.258)	(0.256)	(0.370)	(0.428)
Economic rationality	-0.001	-0.003	0.003	-0.003
	(0.004)	(0.004)	(0.004)	(0.004)
Covariates	no	yes	no	yes
Effective observations	867	867	867	867

Notes: The table presents RD IV estimates of the impact of send-down experience on economic preferences using an alternative Epanechnikov kernel function suggested by Calonico et al. (2017) for nonparametric estimation. In all specifications, we instrument the send-down experience using a dummy for birth date before the September 1, 1961 cutoff. Columns 1 and 3 use local linear and local quadratic RD specifications, respectively. Columns 2 and 4 add gender, minority status, and parental occupations as additional controls. Numbers in the parentheses are standard errors clustered at the birth quarter level. ***, **, and * stand for significance at the 1%, 5%, and 10% level, respectively.