Elections Reduce Local Capture: Evidence from Rural China*

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Abstract

Taking advantage of the village elections in rural China, this paper studies whether political decentralization reduce local capture. Exploring a comprehensive dataset spanning from 1986 to 2018, covering the period when elections were rolled out sequentially across the country, we find that the dominant clan --- the largest surname lineage group maintaining an ancestor hall or a genealogy --- enjoys substantial advantages over other clans in office holding and per-capita landholdings before the introduction of elections and these advantages disappear after elections are introduced. This result is robust to a variety of robustness checks. Our study improves the existing literature by providing a before-and-after comparison to assess the impacts of political decentralization on local capture.

Keywords: Political decentralization, local capture, lineage groups

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1. Introduction

Political decentralization is a worldwide phenomenon in the last 30 years. While local elections resulted from political decentralization are found to create policies that are friendly to ordinary people and targeted groups (Chattopadhyay and Duflo, 2004; Martinez-Bravo, Padró i Miquel, Qian, and Yao, 2022), there is empirical evidence showing that local capture and/or clientelism exists in local electoral politics because local elites possess disproportional political power (Acemoglu et al., 2014; Anderson et al., 2015; Cruz et al., 2020). None of the existing empirical studies, though, has conducted before-and-after comparisons, mostly because of the lack of data for the years before decentralization happened. Their results thus may lead to a biased view that political decentralization has the drawback of leading to local capture and/or clientelism. However, in many of the countries that have conducted political decentralization, traditional elite groups have long existed and they could have already dominated local politics before decentralization was implemented. In traditional societies, local elites, relying on customary institutions, were the main agents managing local affairs. In colonial societies, colonizers often relied on local elites to rule their colonies (Acemoglu et al., 2001; 2002). Local elections, to the extent that they empower ordinary people in choosing the local officials, may well erode the power of those traditional elites.

China's introduction of elections at the village level provides an opportunity to test this hypothesis. Village elections were introduced mainly between early 1980s and late 1990s. During this period of time, no other major institutional changes happened in rural China. The rural farming reform was finished in 1984, and the rural tax reform only began in 2003. This paper takes advantage of this period and study whether elections reduced the chances of powerful surname lineage groups (clans, hereafter) to hold village offices and their ability to use public power for their own gains in land distribution. Clan organizations are the most significant social institution in rural China. They are found to facilitate the provision of local public goods regardless the kind of formal institutions in place (Tsai, 2007), and help elections overcome the collective action problem in public goods provision (Xu and Yao, 2015). However, clan organizations could also be used for local capture and elections could mitigate the capture.

Before elections were introduced into the village, the upper-level government (township or county government; "government" hereafter if not specified) appointed the village officials and might well fill the village government with people from strong clans, just like colonizers did in their colonies. This way, government policies could be implemented more

easily. In return, strong clans obtained the power and opportunity to capture the village government for their own benefits. The rural reform restored family farming, but kept the ownership of land to the village as a whole. To respond to demographic changes happening to the village, land was redistributed among villagers every several years (Liu et al., 1998). Strong clans could take advantage of this opportunity to obtain more land for their members once they controlled the village government. Elections stopped the upper-level government's arbitrary right to appoint village leaders and gave the right to the villagers. Strong clans lost the support from the government and had to cater to the interests of other social groups in order to get their people elected. As a result, local capture could be reduced.

In this paper we use the introduction of village elections to test whether and how the introduction of village elections affects local capture. We combine data from two surveys, the Village Democracy Survey (VDS) dataset (Martinez-Bravo et al., 2022) that provides detailed information about the election of each Village Chairman (VC, henceforth) and clan groups in each village from early 1980s to 2018, and the National Fixed-point Survey (NFS) that provides accounting information for the production, resource allocation, and consumption of the village and sample households for the period 1986 – 2008. There are usually many surname lineages in a village. Not all of them are powerful. Our study focuses on the dominant clan (DC, henceforth). We look at two dimensions of characteristics to define the dominance of a clan: the size of population, which measures a clan's strength by the number, and whether maintaining an ancestral hall (AH, henceforth) or compiling a genealogy (GE, henceforth), which measures a clan's social cohesiveness. We study the dominant clan (DC, henceforth), which is defined as the clan with the largest size of population and maintaining an AH or compiling a GE.[1] We focus on the DC because it is the strongest solidarity group in the village and past research has found that it plays a dominant role in the village's social and economic life (Tsai, 2007; Xu and Yao, 2015; Foltz, Guo and Yao, 2020). Before elections were introduced, people from the DC were most probably appointed to the VC by the government. Upon the introduction of elections, the position of VC was subject to the votes of all qualified villagers. This reform was mandated by the central government and rolled out in a top-down fashion by provincial governments. Once a provincial government decided to implement village elections, virtually all villages in that province followed within a few years. So the introduction of elections was exogenous at the village level (Martinez-Bravo et al., 2022).

[1]In the case where there is only one surname in the village, we study the largest lineage group (*fang*).

We study two aspects of capture. One is the DC's probability of office holding (POH, henceforth) for the VC before and after the introduction of elections, and the other is the DC's advantage in landholding. We find that prior to the introduction of elections, DCs are about 18 percentage points more likely than other clans to serve as VCs, and after the introduction of elections, this advantage drops by 16 percentage points. That is, elections almost wipe out DCs' advantages in office holding. This result is robust to controlling for additional fixed effects, defining social cohesiveness by historical record of AHs, and ignoring the elections happening before 1987. In addition, no pre-trend is found. We also conduct a placebo test by studying the position of the village party secretary (VPS, henceforth). The VPS is not elected by popular votes, but is nominated by the upper-level party organ and is voted by the village party committee. Consistent with our expectation, we find that DCs have an advantage for the VPS over other clans no matter whether local elections are in place.

We find that families from DCs have higher levels of per-capita landholding than families from other clans before the introduction of elections and this advantage is wiped out by elections. More precisely, families from DCs enjoy an advantage of per-capita landholding equivalent to 14.7 percent of the village average before elections are introduced, but this advantage completely vanishes since the onset of elections. We also study government subsidies received by families and family income from production, and find that elections tend to equalize them across households.

Our paper makes significant contributions to the literature on political decentralization. Methodology-wise, we improve the existing literature by providing a before-and-after comparison to assess the impacts of political decentralization. The existing studies focus on the determinants of local capture/clientelism and ways to improve the performance of political decentralization, all in the setting of electoral politics that has already existed (see the reviews provided by Mookherjee, 2015; and Bardhan and Mookherjee, 2023). While they have provided useful insights, those studies do not provide a counterfactual of political decentralization. But things under the counterfactual, i.e., under a centralized political system, could be even worse because the central authorities may have to rely on local elites to rule in favor of them, just like the colonizers did in their colonies. The full picture of the role of political decentralization cannot be determined until before-and-after comparisons are conducted. Our study fills the gap.

Our finding that elections reduce local capture supports the thesis that political decentralization improves local governance, the initial premise of this institutional reform. The theoretical literature casts doubt on the role of democratization to curb elite control.

Acemoglu and Robinson (2008) show that the elites can invest in *de facto* power to sustain economic institutions favoring themselves even when the society transits to a democracy. Elite capture can only be avoided if ordinary people are sufficiently empowered by democracy. Acemoglu et al. (2014) provide an empirical study for the persistent power of the old elites in Sierra Leone. The power of paramount chiefs can be traced back to the ruling families originally recognized by British colonial authorities. They find that in chiefdoms with fewer ruling families, development outcomes are significantly worse today, possibly because chiefs face less political competition in those places. Anderson et al. (2015) find that high-caste groups take advantage of their higher social statuses and large landholdings to block pro-poor policies in rural Maharashtra, India. "A subtle perversion of democracy, leveraging existing social and economic hierarchies, can explain persistence of elite (minority) control despite the implementation of democratic (majoritarian) structures." (Anderson et al., 2015, P. 1782) That is, high-caste groups are able to subvert democracy because they are backed by strong social and economic hierarchies that cover them from competition. In a theoretical paper, Bardhan and Mookherjee (2000) identify a range of conditions for capture to happen at the local level. Among them, the level of competition is one of the most prominent.

The dominant clans in China may face more competition than the elites in other rural societies. There are many surname clans in a village. Despite the dominant clan --- the largest and socially more cohesive one --- enjoys disproportional power, other clans are not muted. Some of them can also be well organized and pose a serious challenge to the dominant clan. When the village government was appointed by the upper-level government, competition was suppressed. But when elections were introduced, the dominant clan had to face the challenge of other clans and yield in to their demands. We find that in villages where the second-largest clan also has an AH or maintains a GE, elections exert larger effects on the dominant clan. The conclusion also holds in villages where more large clans have an AH or a GE. Indeed, in the election period this study covers, a clan's probability of office holding was roughly the same as its share of population in the village. Numbers really rules in elections. Our finding thus is broadly in line with the literature that finds competition to be key to avoiding elite capture.

We also make a contribution to the literature on the role of informal social networks and/or institutions in society. Many existing studies have been devoted to finding the

positive roles of informal social networks played in social, economic and political life.[2] However, like any other organizations, informal social groups have boundaries and have to exercise some forms of exclusion in order to maintain internal cohesion. In this respect, informal social groups are interest groups that share the same problems of the interest groups in a modern society. They may strengthen the social fabric and thus facilitate the provision of public goods, both tangible and intangible, for society. But their exclusivity may also cause distortion in society. Capturing the government is one way for them to enrich their own members and to exclude others. The introduction of free and fair elections has the potential to reduce the extra political power that each informal organization possesses beyond votes. In our case, we find that village elections are able to minimize the extra power owned by the dominant clans and get rid of their capture of the village government. While we don't want our finding be read as evidence negating the merits of informal social networks, we do contribute to the literature by drawing attention to the downsides of informal social networks and the correcting role that formal institutions could play on them.

The rest of the paper proceeds as follows. In section 2 we outline the historical background to describe the roles of surname lineage groups in historical and contemporary China. In Section 3 we describe the data and provide some descriptive evidence. In Section 4 we present the results of elections' impacts on the dominant clan's POH and perform a number of robustness checks. In Section 5 we study elections' role in equalizing the landholdings between the dominant clan and other clans. In Section 6 we draw the concluding remarks.

2. Historical Background

2.1 Clans in Rural China

Clans are one of the most important social organizations in Chinese villages, and they are conventionally organized along the paternal line. In historical China, the imperial court generally adopted a light taxation policy to reduce the probability of peasant revolts. In accordance, it also adopted a cost-minimization approach to managing the country. Imperial power usually stopped at the county level and grassroots society was left to the clans to manage (Fei, 1946). Clans were often led by the largest clans in the village, which in most

[2] A sample of recent studies finding positive roles of lineage groups in contemporary and historical China includes Tsai, 2007; Xu and Yao, 2015; Kung and Ma, 2014; Foltz et al., 2020; Zhang, 2020; Cao, et al., 2022; and Chen et al., 2024.

cases was founded by the largest clans. As Watson (1982) reports, "It is common to find villages that contain one or two cohesive clans with four or five loosely-defined clan groups". To exercise their leadership, the largest clans have developed rituals and activities that buttressed their power, including building ancestral halls, compiling lineage genealogies, and organizing ceremonies during festivals. As a result, they became socially more cohesive than smaller clans.

After the communist revolution in 1949, the party replaced the clan system by the administrative village to manage the grassroots society (Wang, 2006). As a governing unit, an administrative village might include one or more adjacent clans. The old social structure was broken. In addition, old rituals and related mass activities, often organized by clans in the past, were either forbidden or suppressed. As a result, the clan system, as a social institution, was considerably weakened (Hsu, 1963). But it did not disappear completely, and played a subtle, and sometimes even critical role in grassroots China. The village still relied on the largest and more cohesive clans to solve collective action problems such as conflict resolution and cooperative actions, especially in southeastern China (Freedman, 1958). Local cadres often had to take advantage of the existing resources, including clan organizations, to achieve their objectives (Perry, 2002). In addition, social embeddedness could weaken local cadres' incentives to adopt radical policies promoted by the central government in political movements (Hu, Yao, and You, 2024). No wonder much of the tradition value came back to rural China by the time when rural reform began in 1978 (Friedman et al., 1991; Putterman, 1993).

Together with the rise of the traditional values, large clans have regained some of their advantages over other clans since the early 1980s. These advantages are first and foremost related to their historical roots in villages. Like in the past, large clans are more likely than smaller clans to maintain lineage AHs, to keep lineage GEs, and to hold clan ceremonies. So they are still better organized than small clans. In that event, the largest and well-organized clans (namely dominant clans) are relatively better able than other clans to mobilize political support for their causes.

The 1982 Constitution grants the village a self-governing status. Elections immediately began in some localities. In most villages, though, the VC was appointed by the government. What the government cared most about the VC was whether he could successfully implement government policies. It was natural for the government to choose the VC from large and socially better organized clans, just like the colonizers did in their colonies. Absent of popular pressures, it was easy for the VC to use his office to gather benefits for his own

clan. In many cases, the head of the largest clan served life-time as the VC and/or the VPS and created a miniature family empire (Mattingly, 2016).

However, large and strong clans are not immune of competition. In contemporary China, the social structure sustaining their dominant position in the village is no longer explicitly recognized by society. Their power rests on their contemporary contribution to village life as well as their historical advantages. Other clans have incentives to enter the ring of competition. The introduction of local elections has enhanced those incentives; other clans, probably by forming alliances, now have the opportunity to beat the dominant clans by sheer numbers. Studies have found that villagers are organized along the clan line in elections and in some cases fierce competition happens between clans (O'Brien and Han, 2009; Mattingly, 2016). This feature may distinguish China's political decentralization from political decentralization in other countries where the social structure supporting the elites has virtually not changed over time.

2.2 Village Governments and the Electoral Reform

Each village has two leaders. The VC, also referred to as the village "chief" or "head", leads the village committee that manages the village as a self-governing unit. The VPS leads the village party committee that represents the Chinese Communist Party (CCP). The division of labor is not clearly defined between the VC and the VPS although nominally the village committee functions under the guidance of the village party committee. Before elections were introduced, both positions were appointed by the government. In that period, the VPS usually had more power than the VC.

The first wave of elections happened soon after the 1982 Constitution was enacted. In 1987, an experimental version of the Organic Law of the Village Committee (OLVC) was announced. The law mandated that VCs be elected by villagers. Village elections began to spread quickly throughout the country. Provinces took a top-down approach to introduce elections in their jurisdictions. Once a few villages started the first election, other villages in the same province followed quickly in the next few years. In 1998, the formal version of the OLVC was put in place and virtually all the villages started elections in the following several years. In the literature, studies have found that the introduction of elections was exogenous to the villages (e.g., Martinez-Bravo et al., 2022).

The main thrust of the reform was to allow the VC and other members of the village committee to be elected by the villagers. VCs are to be elected for three-year terms without

term limits. The members of the village party committee are elected by the CCP members in the village, and the VPS is basically appointed by the government.

Based on a model of organizational theory, Martinez-Bravo et al. (2022) have documented the rise and fall of China's village elections. In the 30 some years between early 1980s and 2010, the government had limited organizational capacities and had to rely on villagers to select competent VCs and monitor them. Village elections flourished and improved the villagers' welfare. They also shifted the power in the village from the VPS to the VC. Since 2010, a reversal has happened; the government has tightened its control of village elections. Now, the VPS is encouraged to run for the position of VC, and once a non-party member wins the election, the party quickly recruits him. As a result, the VPS and the VC are increasingly assumed by one person. This change has happened because the government now has more organizational capacities among which sufficient fiscal revenue is the most important.

We mainly study the period 1986 to 2008 because the NFS data only cover this period. So our results are not affected by the reversal of the quality of elections. We also study the whole period of 1980 to 2018 for elections' impacts on the VC's POH in sub-periods.

2.3 Land Tenure

The rural reform in the period 1978 – 1984 dismantled the commune system and set up a new system called the Household Responsibility System (hereafter HRS). Under the HRS, land is legally owned by the village, but is contracted out to individual households to farm. The initial term of the contract was set to 15 years; later it was increased to 30 years. However, the collective ownership of land entitled individuals equal access to the village land. As a result, land was often redistributed sporadically to adapt to the demographic changes happening in the village. Households with a declining size had to give up some of their land,[3] and households with an increasing size were entitled to get more land. This practice was only stopped when the government began to issue land titles in 2010. One of the key reasons for villagers to accept land titles was that farm income had declined substantially and no longer a main part of household income.

[3] The definition of land entitlement varied across the country. In addition to the death of a family member, the following events might be taken as reasons for households to surrender land to the village: daughters' marrying a man outside the village, children's admission to college, family members' taking a government job; family members' long-term migrating to another province (Liu et al., 1998).

Before land was titled, one of the key responsibilities of village leaders was to adjust land distribution in the village. Major adjustments aimed at clearing up the demographic changes accumulated over the years. Most households were involved in such adjustments. In our sample, more than half of the sample villages conducted at least one major adjustment in the period 1986 – 2008 (Appendix Figure A1, Panel (a)). In between, minor adjustments also happened to deal with the insufficiency of a smaller number of households.[4] Land redistribution is detrimental to agricultural production (Liu et al., 1998; Rozelle and Li, 1998). In many villages, the village government kept a small fraction of land and drew land from the pool to conduct the minor adjustments.

Although villagers were consulted, the village leaders had substantial power in the decision of land adjustment. For one thing, they could use land redistribution to extract compliance and cooperation from villagers to pursue the goals set by the government (e.g. tax payments, family planning, and production quotas). For another, they could abuse their power to enrich themselves and their clans. When they were appointed by the government, doing so might not incur much cost on them. After elections were introduced, though, their incentives might be drastically changed. To win office and to keep the office, they had to cater to the demand of the majority of villagers. Ensuring a fair and egalitarian distribution of land now became a mandate of their job. Because of that, large adjustments of land distribution happened more frequently after elections were introduced (see Appendix Figure A1, Panel (b)). Brandt et al. (2002) also find that land reallocations were more frequent in villages with contested elections in which two or more candidates vied for the position of the VC.

3. Data and Descriptive Evidence

3.1 The Sample

Our analysis aims at examining the effects of elections on dominant clans' probabilities to obtain/stay in power and their tendency to manipulate land distribution. We merge the NFS and the VDS to obtain an almost ideal panel data set on clans, elections, and household landholdings. A detailed description of the two surveys can be found in Martinez-Bravo et al. (2022). Here we provide a concise description of them.

The NFS is a longitudinal survey maintained by the Research Center of Rural Economy (RCRE) of the Ministry of Agriculture. It was started in 1986 and a panel structure has been

[4] The VDS did not record small adjustments because of the worry of misreporting.

maintained although there have been sample adjustments due to merge of villages and villagers' migration. It contains detailed information on household social and economic characteristics (e.g., the surname, household demographics, income, and agricultural records including the dates of contracting farmland and its amounts), as well as village-level information for income, population, employment, agricultural production, and migration. An advantage of this data set is that 100 households, on average, are surveyed in each village, so calculation of village-level land inequality can be carried out with a reasonable accuracy. The VDS was conducted by the China Center for Economic Research at Peking University in three waves, in 2006, 2011 and 2018, respectively, on 319 villages from the NFS sample. [5] One advantage of the survey is that in addition to detailed information about elections, it provides relatively detailed information for the four largest clans in each village, especially their ownership of ancestor halls and genealogies. In particular, the VDS records detailed information on the attributes of the VC such as surname, tenure, gender, age and working experience before and after the election was introduced. In Chinese villages, clans are identified by surnames. Therefore, for each clan in the sample of VDS, we can identify whether and when its members became a VC.

With the combined dataset, we obtain three samples for our study. The first sample, V1, is a village-level sample that covers 253 villages for the period 1980 – 2010. This is the main sample for our study of clans' probability of office holding. The second sample, V2, augments V1 by adding the years in the period 2011 – 2018. We use this sample to study the impacts of the erosion of electoral quality since 2010. The third sample, HH, is a household-level sample that covers 2,106 households from 28 villages for the period 1986 – 2008. The RCRE only provides household data for one third of the 253 villages. Among them, we have to delete the villages that conducted the first election before 1986 to allow us to identify the effect of elections. A description of the variables in the three samples is provided by Appendix Table A1.

3.2 Village Elections and the DCs' Power

Figure 1 presents the cumulative percentages of villages with elected VCs. Elections started in as early as 1980. By the time close to the introduction of tentative version of the

[5] The NFS covers 332 villages. The VDS covered a smaller number of villages due to administrative reasons.

OLVC, the number of villages starting elections went up rapidly. By 1990, around 70 percent of villages had introduced elections. By 2000, another 20 percent of villages joined the rank.

[Figure 1 here]

DCs are defined by clans' shares of population and their possession of AHs and GEs in 1986. But since samples V1 and V2 include years before 1986, our definition of DCs may be subject to the endogeneity problem. To deal with this problem, we move the definition year to 1978 in our robustness checks. While clans' ranks of population were stable in a village, more clans had AHs or GEs in 1986 than in 1978 due to the revival of traditional values in between. By our primary definition based on AHs or GEs in 1986, there were 113 DCs (so 44.3 percent of villages had DCs), whereas the number only declines slightly to 110 by AHs or GEs in 1978. This is our main reason to use 1986 to construct the primary definition of DCs. By the DCs thus defined, 48 had AHs, 105 had GEs, and 40 had both. On average, a DC accounted for 41.8 percent of village population in 1986. Note that clans' shares of population changed over time. This gives us a chance to control DCs' shares of population when we estimate their advantages in POH and landholdings.

Our preliminary econometric exercises find that on average, prior to the election dominant clans are 41.0 percentage points more likely than other clans to be appointed as a VC if the share of population is not controlled (Appendix Table A2, Panel A). The advantage declines to 19.0 percentage points when the share of population is controlled for. The elasticity of the share of population is 0.82. Following the introduction of the election, villagers acquired the freedom to nominate and vote for candidates. As a result, the advantage of the DC might decline. This is indeed what we have found in our preliminary analysis: After controlling the share of population, the gap between the dominant clan and other clans disappears (Panel B of Appendix Table A2). In contrast, the elasticity of the share of population increases to 0.97. That is, the POH of a clan, regardless whether it is a DC or non-DC, becomes almost proportional to its share of population once elections are in place.

To give it a visual presentation, we present in Figure 2 the POHs of the DC and other clans over time, conditional on clans' share of population and the NFS village controls. The POHs of the other clans are not distinguishable from zero in any year before or after the first year of elections. They are basically determined by their sizes of population. In contrast, the POHs of the dominant clan are mostly significant and positive before the first year of elections. That is, the dominant clan possesses extra advantage other than population. However, elections eliminate this advantage because the DC's POHs are turned indistinguishable from the POHs of other clans after elections are introduced.

[Figure 2 here]

3.3 Elections and Landholdings

The NFS's household survey collects information for the household heads including his/her surname in addition to the regular information about household economic activities including landholding and land allocation. As a result, we can identify the clan that a household belonged to.

As we have expected, households from the DC held clearly more land than households from other clans before elections were introduced, and this advantage disappeared once elections were introduced (Appendix Figure A2). Table 1 provides the results of raw DID analysis for the impacts of elections on per-capita landholdings within Sample HH. To control for geographic disparities in landholdings, we have normalized household per-capita landholding by the village mean. But we will refer to it still by household per-capita landholding when no confusion arises. On average, before elections households from DCs held 6.08 percent more land than those from other clans. This gap, however, dropped close to zero after elections were introduced. Our more sophisticated econometric analysis in Section 5 will verify those results.

[Table 1 here]

4. Elections and the dominant clan's POH

In this section, we study elections' impacts on the dominant clan's advantage in obtaining the office of VC. We begin by describing our identification strategy, and then present our baseline results. After that, we will conduct several additional analyses and robustness checks.

4.1 The Identification Strategy

We start by considering the following triple-difference model:

$$VC_{ivt} = a + \lambda domclan_{iv} + \beta postelec_{vt} + \gamma domclan_{iv} \times postelec_{vt} + \varphi' Z_{ivt} + \eta_v + \delta_t + \eta_v \times t + \varepsilon_{ivt} \quad (1)$$

where i indicates the clan, v indicates the village, and t indicates the year. The dependent variable, VC_{ivt}, is equal to 1 if the VC came from clan i in village v in year t. The variable, $domclan_{iv}$ is a dummy variable that equals 1 if clan i was the dominant clan, and 0 otherwise. The variable $postelec_{vt}$ is also a dummy variable that is equal to 1 if elections were in place in

village v in year t and 0 otherwise. The additional variables/parameters η_v, δ_t, and $\eta_v \times t$ are, respectively, the village fixed effect, the year fixed effect, and the village-specific and linear time trend. Finally, ε_{ivt} is an i.i.d. error term.

The coefficient λ measures the gap of POH between the dominant clan and other clans before elections were introduced. The coefficient β measures the effect of elections on the other clans' POH. It controls the trending effects of elections. Finally, the coefficient γ captures the differential effect of elections between the dominant and other clans. We are primarily interested in γ. We expect it to be negative because elections are expected to reduce the dominant clan's advantage in office holding. Since the presence of clans varied by village and the introduction of elections was decided by the province government, we presented standard errors clustered at the village level.

One of the advantages of our data is that they provide within-village variations over time so we are able to control village fixed effects. This is important because the distribution of clans follows a distinctive geographic pattern, so its impacts are likely to be contaminated by latent geographic factors and thus are not readily identifiable. The village fixed effects control all the permanent unobservable characteristics, which are likely to be correlated with both the outcome variable and our main explanatory variables (the presence of the dominant clan and the onset of the election). The year fixed effects absorb any potential event contemporaneous with the election for all the villages (for example, a national migration policy). They ensure that our identification is obtained conditional on shocks common to all the villages with or without elections in each year. Finally, the village-specific time trends account for possible slow-moving social and cultural variables (e.g., civil and human capital accumulation) specific to each village in the sample. For instance, in villages experiencing improvements in education and civil capital accumulation, villagers' participation in elections might steadily increase. The inclusion of the fixed effects and time trends allows us to exploit the random nature of the onset of elections, which is crucial for our econometric design.

We are also interested in the long-run impacts of elections as well as checking whether there were pre-trends that confound our baseline results. For that, we employ an event study strategy to estimate the following dynamic differences-in-differences model:

$$VC_{ivt} = a + \lambda domclan_{iv} + \sum_{\tau=-10}^{10} \beta_\tau I(t - election_v = \tau) + \sum_{\tau=-10}^{10} \gamma_\tau domclan_{iv} \times I(t - election_v = \tau) + \varphi' Z_{ivt} + \eta_v + \delta_t + \varepsilon_{ivt} \quad (2)$$

In the equation, the variable $election_v$ equals the year when the first election was introduced in village v, and $I(\cdot)$ is a binary indicator for the event in the parenthesis. All other variables are defined as before. Estimates of the coefficients γ_τ represent the differential effects of elections between the dominant clan and other clans in the τ-th year before or after the first election. We consider 10 years before and after the first election. The time span is long enough for us to obtain reliable estimates for the long-term impacts of elections.

4.2 Baseline Results

Table 2 present the baseline results from Model (1) estimated on Sample V1. Column (1) only includes the village and year fixed effects, column (2) adds the village-specific time trends. The estimates of λ are positive and statistically significant at the 1% significance level in both regressions. This means that dominant clans are significantly more likely than other clans to be appointed as the VC prior to the introduction of elections. Their advantage is around 40.9 percentage points (column (2)). Elections undermine this advantage. The estimates of γ are negative and statistically significant. By the estimate of column (2), elections reduce the dominant clan's advantage by 11.4 percentage points. Interestingly, the estimates of β are positive but insignificant. This means elections slightly increase other clans' probability of gaining office. But this result has to be qualified by other factors that are not yet controlled in our regressions.

[Table 2 here]

It is found by the literature (e.g., Tsai, 2007 and Xu and Yao, 2015) that social cohesion is more important than the size of population for clans to perform various social functions. We followed this line of findings when we decided to focus on the dominant clan. But the government might take into account of the clan's size when it appointed the VC before elections were introduced, and the size of population might have been an important determinant for the results of elections because, after all, votes have the final say in an election. To see if our baseline findings are robust to the above consideration, we control for clan size and report our new results in column (3) of Table 2. The share of population is indeed a significant factor determining a clan's POH before elections are introduced. The elasticity of the size of population is 0.82. Accordingly, the DC's advantage before elections is reduced to 18.9 percentage points. This means that our estimates of λ in columns (1) and (2) do include the effects of the larger size of the dominant clans. Consistent with this reasoning, the estimates of γ have become larger than those presented in columns (1) and (2). Clan size does

matter in elections. Because a dominant clan on average has a larger size of population, the impact of elections would be underestimated if clan size were not controlled. A contrasting, but consistent result is that the estimates of β are now nearly close to zero. The slightly increased POH that we've found for other clans before is a consequence of their smaller sizes of population under elections.

Finally, column (4) of Table 2 shows whether our baseline findings are robust after we include seven village-level time-varying control variables from the NFS, namely, log average income per capita, log village population, average years of education, the share of non-farm labors, log number of people working outside the village, an indicator for poor villages and an indicator for villages that were seats of the township government. Our main results are preserved and the estimates are closer to those presented in column (3).

4.3 Pre-trends and Dynamic Effects

We estimate Model (2) to test whether there were pre-trends and to find out the long-term effects of elections. The estimates of γ_τ are presented in Figure 3 (the solid line). Consistent with our baseline results, the dominant clan possesses a significant advantage over other clans before elections are introduced, and this advantage is eliminated by elections. Pertinent to our econometric design, we do not find a significant trend before the onset of elections. The estimates of γ_τ are all significant except the 9th and 10th year before the first year of elections. In contrast, none of the years after elections start registers a significant estimate. Democracy consolidates once it is started. We will test this thesis when we include in our analysis more recent years when the quality of elections began to decline.

[Figure 3 here]

The role of population needs more discussion. Before elections are introduced, the elasticity of clans' share of population is around 0.8. This means that the government largely followed the distribution of population to allocate the office of VC. Smaller clans also had a chance to take the office. This might be a co-opting strategy taken by the government to stabilize the grassroots society. However, the imperfect elasticity (i.e., it is not one) implies that there was space for the dominant clan to exercise power based on their extra ability brought about by their social cohesion. The reason of the existence of this space probably was that government appointment did not carry enough legitimacy and the government had to turn to social institutions to buttress it. After elections were introduced, this space largely disappeared because the elasticity of the share of population now is found to be around one

(the sum of the coefficient of the share of population and the coefficient of the interaction term between population and elections, shown in columns (3) and (4) of Table 2). That is, the number of votes has become the only means to determine a clan's chances of taking office; no extra source of legitimacy is needed. Elections have truly democratized the Chinese village.

An implication that comes out of the above results and is worth noting is that villagers largely vote along the clan line in elections. Under the one-party rule, there is no space for party politics in China. But elections give rise to political mobilization, which needs a handle to carry out. The clan institution becomes a natural choice for villagers. One of the worries is that this would give powerful clans an advantage to swing local politics. However, our results negate this worry. To the extent that numbers rule, village elections have worked well in China.

4.4 Further Analyses and Robustness Checks

Which matters more, size, social cohesion, or both? We have defined the DC by both its size of population and social cohesion. One may wonder whether we have to take a such stringent definition. Can't the largest size or social cohesion alone suffice to empower a clan? This question is answered by Appendix Table A3. Being the largest group or having AHs or GEs gives a clan a weak advantage. Elections are not found to eliminate the advantage brought by the largest size of population, but elections do reduce the advantage brought by social cohesion. However, in a regression (whose results are reported in column (4) of Table A3) in which the dummy variable of the largest clan and the dummy variable for social cohesion as well as the dummy variable for DC (basically, it is the product of the two dummies) are included, the DC dummy remains significant and elections eliminate this advantage whereas being the largest clan doesn't matter neither before or after elections and being socially cohesive gives a clan a weak advantage both before and after elections. Therefore, being socially cohesive is more important than being the largest clan, but having both traits gives a clan a clear advantage before elections and elections only exert an impact on such a clan which we define as the dominant clan. Because the share of population is controlled in all the regressions, we conclude that the DCs enjoy extra power above the level implied by the number of their votes before elections are introduced and democratization brought by elections eliminates it. This is why we pay attention to both the size of clan and social cohesion, not just social cohesion.

Additional fixed effects. The village fixed effects allow us to control for village-level time-invariant factors. But there could be village-specific and time-varying factors that affected the performance of elections and are uncovered by the village-level variables we have included in our regressions. Here we conduct three robustness checks to ensure that our results are robust to those factors. First, we interact each village fixed effect with the election dummy $postele_{vt}$. When both the village fixed effect, $postele_{vt}$ and their interactions are included in the regression, we allow the impact of elections to vary by village. Second, we interact the dominant clan dummy with the year fixed effects ($domclan_{iv}$ is the resulted variable) to allow the dominant clan to have time-varying impacts. Third, we interact village fixed characteristics introduced in Section 4.2 with the year fixed effects to allow their impacts to vary over time. The results, shown in Appendix Table A4, are largely unchanged.

The endogeneity of ancestral halls and genealogies. We have defined the dominant clan by its possession of an ancestral hall or a genealogy in 1986. But since there are villages that started elections before 1986, some kind of reverse causality may exist in our data because elections might increase clans' economic capacity (e.g., by getting more land) to build ancestral halls. Because maintaining records of genealogies requires persistent efforts of clan members, it is less likely to incur such biases (Xu and Yao, 2015). To deal with this possibility, we redefine the dominant clan by the possession of an ancestral hall or a genealogy before 1978, the year of the onset of the rural reform when no elections were held. However, due to the limited availability of data, the sample becomes smaller. In Appendix Table A5, we report our estimates of interest from Model (1), namely, the differentiating effect of elections on the dominant clan's POH. Columns (1) – (3) report the results when the dominant clan is defined by the possession of an ancestral hall or a genealogy built before 1978, and columns (4) – (6) report the results when it is only defined by genealogy. Despite its magnitude varies across regressions, the estimate remains negative and significant.

Excluding early elections. As is clear from Figure 1, a large number of villages started elections before 1986. So an alternative to the previous exercise is to drop those villages so that ancestor halls and genealogies are pre-determined for the remaining villages. We then rerun Model (1) on the smaller sample. The estimate for γ is -0.2194 with a t-statistics of 2.80. Both increase relative to their counterpart baseline results, and remain at decent levels.

Heterogeneous treatment effects. The recent literature has pointed out issues with the dynamic differences-in-differences design, including the possibility that, in the presence of heterogeneous treatment effects, some units may receive negative weights when their

outcomes are aggregated to form the average treatment effect. This could bias the estimates. To check for this possibility, we replicate our results using the estimation method proposed by Sun and Abraham (2021) that is designed to obtain unbiased estimates in the presence of heterogeneous treatment effects. The procedure is outlined in greater detail in Appendix B. The new estimates are indistinguishable from the standard DID estimates (Figure 3, the dashed line, and Figure B1).

The VPS as a placebo test. Elections are meant to elect the VC. In contrast, the VPS is always appointed by the government. Clan affiliation may also be a factor of consideration, just like the VCs before elections were introduced. The introduction of elections should not have an effect on a clan's chances of assuming the office of the VPS. Columns (5) and (6) of Table 2 shows the results of the VPS using the same specification for the VC. When the share of population is not controlled, the estimate of λ is significantly positive (column (5)), indicating that the dominant clan did have an advantage over other clans before the onset of elections. The estimate of γ is statistically insignificant, indicating that the election has no effect on this advantage. When the share of population is controlled, the estimate of λ is also turned insignificant. So the DC's advantage before elections was likely a result of its large size. At any rate, the placebo test of the VPS supports our premise that it is the popular pressure offered by elections that eliminates the DC's advantage in office holding.

4.5 The Role of Competition

Because most existing studies have found that elite capture exists in local electoral politics, our finding that local elections eliminate dominant social groups' advantage in office holding needs an explanation. Existing theoretical and empirical works suggest that competition is key to reducing elite capture in local politics (Bardhan and Mookherjee, 2000; Acemoglu et al., 2014). In this subsection, we will explore inter-village variations offered by our data to see whether the DCs are more likely to lose their advantages in villages with more intense competition.

Because we've found that social cohesion is more significant than size to determine the DCs' advantages, we measure the level of competition in a village along the line of social cohesion. We study two aspects of competition.

First, we look at whether the second-largest clan maintained a AH or compiled a GE. The premise is that if the DC faced competition, the competition would have to first come from the second-largest clan because its number of voters is the closest to the DC's. If the second-

largest clan is also socially as cohesive as the largest clan, then the competition can be tense. We divide our sample into two subsamples, one in which the second-largest clan had an AH or a GE, and the other not. Then we estimate Model (1) on the two subsamples separately. The results are presented in the first two columns of Table 3. The contrast is very telling: while the DC possesses virtually the same level of advantage in POH as the one we've found in the whole sample, this advantage survives elections in the second subsample, but is eliminated by elections in the first sample. Column (3) then merges the two sample and estimates Model (1) again by adding an interaction term between the DC dummy and the second DC dummy and a triple interaction term between the first interaction term and the post-election dummy. The estimates are not immediately telling, but the marginal effect of elections is virtually the same as that implied by the first two regressions.

Second, we look at the share of large clans with AHs or GEs. The VDS records the information of AHs and GEs for the largest four clans in a village. Using this information, we divide the sample villages into two sub-samples, one with three or more large clans possessing an AH or a GE, and the other with only one or two such clans (i.e., the DC). Then we replicate the exercises in Columns (1) – (3). The results are qualitatively the same. Therefore, we conclude that competition is the driver for elections to eliminate the DC's advantage in office holding.

[Table 3 here]

4.6 Erosion of Electoral Quality

The above results are obtained for the period when the role of village elections expanded in rural China. It is a legitimate question whether our results survived the years since 2010 when the CCP government began to place controls on village elections. For that, we estimate Model (1) on Sample V2 that extends to 2018. In the estimation, we divide the post-election period into four sub-periods: before 1992, 1992 – 2002, 2003 – 2010, and 2011 – 2018. The estimation results are presented in Appendix Table A6. Here we provide a visual presentation in Figure 4. The figure shows the gap of POH between the DC and other clans before elections and in the four post-election periods. Consistent with our previous results, the gap is significantly positive before elections. However, it is not significantly from zero in any of the post-election periods, including the period 2011 – 2018. That is, erosion of electoral quality does not revert the achievement that democratization has brought to office holding. The following paragraph gives an explanation to this finding.

Elite capture and the erosion of electoral quality (in the Chinese context) happen in two different dimensions. The former is concerned about the relationship among social groups, and the latter is defined by the CCP government's intervention of elections. Before elections were introduced, the CCP government tapped into the organizational resources offered by the traditional social structure and tended to appoint people from the DCs to run the village government. Village elections have changed the political dynamism in the village; electoral contest is now regarded as one necessary step for a villager to assume village office. For two reasons, the CCP government may prefer to go along with the outcomes of elections. First, elections help the government to pick up competent village leaders. To counterbalance those leaders' popular mandate, the CCP co-opt them by offering them a position --- increasingly, the elected VC is offered the position of the VPS --- in the village party committee. Second, elections enhance the legitimacy of the CCP's handpick of its own people. One piece of evidence is that the CCP encourages the existing VPS to run for the office of the VC. Therefore, elite capture has not come back in the period when the CCP strengthens its control on village elections.

5. Elections and Land Capture

5.1 DCs' Advantages in Landholdings

In the period covered by our household sample (Sample HH), land was still the most precious production factor for farm households in rural China. Landholdings thus is a good case to test local capture. Our household data allows us to match landholdings to the clan structure in the village and thus to pin down whether there was capture and whether elections reduced capture. The exercise in Table 1 suggests that there was indeed capture before elections and it was reduced by the introduction of elections. To provide a more rigorous test we estimate the following model:

$$\begin{aligned} Landholding_{hivt} = {} & a + \lambda domclan_{iv} + \beta postelec_{vt} + \gamma domclan_{iv} \times postelec_{vt} \\ & + \varphi' Z_{ivt} + \rho' X_{hivt} + \eta_v + \delta_t + \eta_v \times t + \varepsilon_{hivt} \end{aligned} \tag{3}$$

It is the same as Model (1) except the dependent variable is changed to *landholding*, which is the per-capita landholdings of household h that belonged to clan i in village v in year t (relative to the village mean). The other variables are the same as in Model (1). The coefficients also have similar interpretations as those defined in Model (1). In particular, γ is our main concern and represents the differential effect of elections on per-capita landholdings for households from the dominant clans and households from other clans.

In column (1) of Table 4 we present the result of Model (3) only with the village and year fixed effects. As expected, the dominant clan holds significantly more land than other clans before elections are introduced (λ is significantly positive). The advantage is equivalent to 4.80 percent of the village mean landholding. Elections completely wipe out this advantage as the estimate of γ is larger than the estimate of λ. These results remain robust when we control for village-specific time trends (columns (2)). Stronger results are found when clans' size of population is controlled (column (3)). The nature of land tenure implied by the HRS decides that the distribution of land largely follows the distribution of population. So after the share of population is controlled, the DC's advantage becomes more visual. So is the role of elections to negate this advantage. Controlling for the NFS village and household observables does not change the results (columns (4) and (5)).

[Table 4 here]

As in the study of office holding, we conduct an event study for landholdings. To obtain more significant results, we study three-year averages and estimate the following regression equation: [6]

$$Landholding_{hivt} = a + \lambda domclan_{iv} + \sum_{\tau=-4}^{4} \beta_\tau I_{\tau vt} + \sum_{\tau=-4}^{4} \gamma_\tau domclan_{iv} \times I_{\tau vt} + \varphi' Z_{ivt} + \rho' X_{hivt} + \eta_v + \delta_t + \varepsilon_{hivt} \quad (4)$$

where $I_{\tau vt}$ ($\tau \in [-4, 4]$) is equal to 1, respectively, in the first, second, third, and fourth three-year interval before and after the onset of elections, and 0 otherwise. (Note that although data are annual, the effects are aggregated every three years.)

Figure 5 presents the results. Panel (a) plots the household landholdings of the DC and other clans, and Panel (b) plots their differences (the solid line). In the years before the onset of elections, household landholdings of the DCs are significantly larger than those of other clans. Upon the introduction of elections, however, the difference disappears.

[Figure 5 here]

Our estimates of the decrease in DCs' advantages over other clans in landholdings remain robust to controlling for additional fixed effects (Appendix Table A7, columns (2), (3) and (4)), defining social cohesiveness by historical record of AHs and GEs (columns (5) and (6)), replacing the dependent variable by per-labor landholdings (columns (7) and (8)) and presenting standard errors clustered at the village level (columns (9), (10) and (11)), as well as to allowing for heterogeneous treatment effects (Figure 5, the dash line in Panel (b)).

[6] We have tried the event study by year and obtain large confidence intervals, see Appendix Figure B2. Obviously, annual data contain large noises.

5.2 Clan Dominance or the Power of Office?

One immediate doubt about the above results is whether those results have been driven by the DC's larger chances of office taking. If that had been true, then we would have provided evidence for office abuse, not for elite capture. To answer this question, we control a clan's status of holding the office of the VC or the VPS in Model (3).

We first study the case in which a clan took either the office of the VC or the office of the VPS. Column (1) of Table 5 reports the results. Taking office does not increase the landholdings of households from the office-holding clan before elections are introduced, and elections do not change this finding. Columns (2) and (3) look at the office of the VC and the office of the VPS separately. No significant results are found in either case. Then, column (4) presents the results of a horse-race model for clan dominance and office taking (for the VC or the VPS). Again, the estimates related to office taking are insignificant. However, the estimates related to the DC are essentially the same as in Table 4. Lastly, column (5) reports the results when the DC dummy is interacted with the office-holding dummy. Again, they are qualitatively the same as those reported by Table 4. Therefore, we conclude that our baseline results are not driven by office taking.

[Table 5 about here]

Appendix Figure A3 presents a more detailed study. In the figure, we conduct a two-dimension comparison before and after elections, respectively. In the first dimension, we compare the dominant clan and other clans, and in the second dimension, we compare office taking and no office taking (so there are four scenarios in total). Before elections are introduced, other clans not in office do not possess any advantage; their landholdings are just the village average. When they take office, their landholdings become slightly higher than the village average. The situation of the dominant clan is just opposite --- its families have higher landholdings when it is not in office than when it is in office --- although in both cases its families have higher landholdings than families from other clans. It seems that the dominant clans have to care a bit about other clans when it is in office, probably to co-opt other clans to gather political legitimacy. After elections are introduced, things are totally changed. In none of the four scenarios, household per-capita landholdings are significantly different from the village average. Elections have totally equalized landholdings across social groups regardless whether they hold office.

5.3 The Role of Competition

In section 4.5, we showed that elections almost wipe out the DCs' advantages in office holding when the second-largest clan is as socially cohesive as the DC or when half of the village's largest clans are so. We now investigate whether competition also reduces DCs' advantages in landholdings. For that, we repeat the exercises in Table 3 for per-capita landholdings and present the results in Table 6. They are qualitatively the same as those presented in Table 3. Clan competition not only erodes the DC's advantage of office holding, but also eliminates its advantage in landholdings. Together, these findings confirm that the level of competition plays a prominent role in explaining why democratization reduces local capture.

[Table 6 here]

5.4 Other captures

In the previous subsections, we have shown that DCs' advantages over other clans in per-capita landholdings, the most important resources in Chinese villages in the period covered by this study, almost disappear following the onset of elections. We now investigate two other areas to see whether capture also happens and whether elections eliminate it.

First, we look at the fiscal subsidies from government. The NFS household dataset records the amount of fiscal subsidies received by households in the period of 1986 - 2008. we re-run Model (3) by replacing the dependent variable by the logarithm of subsidies from government and present the results in columns (1) - (3) of Appendix Table A8. Indeed, DCs obtain more subsidies than other clans before the onset of elections. This advantage is about 3.6 percent of the mean. However, elections completely wipe out this advantage.

Second, we study household income from production, including farm income and non-farm income. The premise is that if DCs obtain more land or other public resources (i.e. subsidies for machinery) before elections, they should also hold advantages in income from production. We estimate Model (3) for households' per-capita income from production. The results (columns (4) - (5) of Appendix Table A8) are qualitatively the same as those for government subsidies. Elections not only erode DCs' advantage of landholdings, but also eliminate their advantages in government subsidies and income from production.

6. Conclusion

We have found in this paper that village elections eliminated dominant clans' advantages in office holding and land distribution. We take this finding as evidence for political

decentralization to reduce local capture. To our best knowledge, our study provides the first before-and-after comparison for the role of political decentralization. Our further exploration finds that clan competition is a determinant contributing to the positive role of political decentralization.

One question is whether the findings coming out of our study can be extrapolated beyond China. The competitive environment in Chinese villages is undoubtedly a result of the CCP revolution, one of whose aims was to turn over the old social structure and level out the society. To the extent that such a revolution is rarely found outside China, one should be cautious to apply our findings to other societies under the transition to a modern society. However, our findings can be interpreted as evidence for the need of social changes for political decentralization to work properly in those societies. Social institutions can survive drastic changes happening to the formal political institutions and force formal political institutions to adapt. Thus rises the capture of social elites in electoral politics. Viewed from this perspective, our paper complements the existing studies on local capture --- while these studies show how persistent old social structure can distort democracy, our study shows how democracy can work better when the old social structure is substantially weakened.

References

Acemoglu, D., T. Reed, and J. A. Robinson (2014). Chiefs: Economic development and elite control of civil society in Sierra Leone. *Journal of Political Economy* 122(2), 319-368.

Acemoglu, D., S. Johnson, and J. A. Robinson (2001). The colonial origins of comparative development: An empirical investigation. *American economic review* 91(5), 1369-1401.

Acemoglu, D., S. Johnson, and J. A. Robinson (2002). Reversal of fortune: Geography and institutions in the making of the modern world income distribution. *The Quarterly Journal of Economics* 117(4), 1231-1294.

Acemoglu, D. and J. A. Robinson (2008). Persistence of power, elites, and institutions. *American Economic Review* 98(1), 267-293.

Anderson, S., P. Francois, and A. Kotwal (2015). Clientelism in Indian villages. *American Economic Review* 105(6), 1780-1816.

Bardhan, P. and D. Mookherjee (2000). Capture and governance at local and national levels. *American Economic Review* 90(2), 135–139.

Bardhan, P. and D. Mookherjee (2023). Political clientelism and capture: theory and an application. *Indian Economic Review* 58(1), 17-34.

Borusyak, K., X. Jaravel and J. Spiess (2024). Revisiting event-study designs: robust and efficient estimation. *Review of Economic Studies*, rdae007.

Brandt, L., J. Huang, G. Li, and S. Rozelle (2002). Land rights in rural China: Facts, fictions and issues. *The China Journal* 47(1), 67-97.

Cao, J., Y. Xu, and C. Zhang (2022). Clans and calamity: How social capital saved lives during China's Great Famine. *Journal of Development Economics*, 157, 102865.

Chattopadhyay, R. and E. Duflo (2004). Women as policy makers: Evidence from a randomized policy experiment in India. *Econometrica* 72(5), 1409-1443.

Chen, Z., Z. Lin, and X. Zhang (2024). Hedging desperation: How kinship networks reduced cannibalism in historical China. *Journal of Comparative Economics* 52(2), 361-382.

Cruz, C., J. Labonne, and P. Querubín (2020). Social network structures and the politics of public goods provision: evidence from the Philippines. *American Political Science Review* 114(2), 486-501.

Fei, H. T. (1946). Peasantry and gentry: An interpretation of Chinese social structure and its changes. *American Journal of Sociology* 52(1), 1-17.

Foltz, J., Y. Guo, and Y. Yao (2020). Lineage networks, urban migration and income inequality: Evidence from rural china. *Journal of Comparative Economics* 48(2), 465–482.

Freedman, M. (1958). Lineage Organisation in Southeast China: Fukien and Kwangtung. London: University of London and Athlone Press.

Friedman, E., P. Pickowicz, M. Selden, and K. A. Johnson (1991). Chinese village, socialist state. New Haven: Yale University Press.

Hsu, L. K. F. (1963). *Clan, Caste and Club*. New York: Van Nostrand–Reinhold Company.

Hu, Z. A., Y. Yao, and W. You (2024). Social embeddedness, local officials, and China's Great Famine. CCER Working Paper E2023001.

Kung, J. K. S. and C. Ma (2014). Can cultural norms reduce conflicts? Confucianism and peasant rebellions in Qing China. *Journal of Development Economics* 111, 132-149.

Liu, S., M. R. Carter, and Y. Yao (1998). Dimensions and diversity of property rights in rural China: Dilemmas on the road to further reform. *World development* 26(10), 1789-1806.

Martinez-Bravo, M., Gerard Padró i Miquel, N. Qian, and Y. Yao (2022). The rise and fall of local elections in china. *American Economic Review* 112(9), 2921–2958.

Mattingly, D. C. (2016). Elite capture: How decentralization and informal institutions weaken property rights in china. *World Politics* 68(3), 383–412.

Mookherjee, D. (2015). Political decentralization. *Annual review of economics* 7(1), 231-249.

O'Brien, K. J. and R. Han (2009). Path to democracy? Assessing village elections in China. *Journal of Contemporary China* 18(60), 359-78.

Perry, E. J. (2002). Challenging the mandate of heaven: Social protest and state power in China. New York: M. E. Sharpe.

Putterman, L. (1993). Continuity and Change in China's Rural Development: Collective and Reform Eras in Perspective. New York: Oxford University Press.

Rozelle, S. and G. Li (1998). Village leaders and land-rights formation in China. *American Economic Review* 88(2), 433-438.

Sun, L. and S. Abraham (2021). Estimating dynamic treatment effects in event studies with heterogeneous treatment effects. *Journal of Econometrics* 225(2), 175-199.

Tsai, L. L. (2007). Solidary groups, informal accountability, and local public goods provision in rural China. *American Political Science Review* 101(2), 355-372.

Wang, J. (2006). Village governance in Chinese history. In Conference Paper in Spring.

Watson, J. L. (1982). Chinese kinship reconsidered: Anthropological perspectives on historical research. *The China Quarterly* 92, 589-622.

Xu, Y. and Y. Yao (2015). Information institution, collective action and public investment in rural china. *American Political Science Review* 109(2), 371–391.

Zhang, C. (2020). Clans, entrepreneurship, and development of the private sector in China. *Journal of Comparative Economics* 48(1), 100–123.

Tables

Table 1. Effects of elections on per-capita landholdings: raw DID analysis

Period	HHs from DCs	HHs from other clans	Difference
Pre-elections	1.1426	1.0818	0.0608*
	(1.2018)	(0.8672)	(0.0339)
	[3,118]	[10,236]	[13,354]
Post-elections	1.0777	1.0957	-0.0179
	(0.7243)	(0.6015)	(0.0249)
	[6,164]	[18,737]	[24,901]
Changes over time	-0.0649*	0.0139	-0.0787**
	(0.0340)	(0.0159)	(0.0375)
	[9,282]	[28,973]	[38,255]

Notes: The numbers in the cells are per-capita landholdings relative to the village mean. Standard errors clustered by households are presented in the parentheses, numbers of observations are provided in square brackets.

Table 2. Elections' impacts on the POH

	POH for the VC				POH for the VPS	
	(1)	(2)	(3)	(4)	(5)	(6)
Post Election (β)	0.0170	0.0259	0.0010	-0.0017	0.0079	0.0116
	(0.0154)	(0.0161)	(0.0242)	(0.0351)	(0.0137)	(0.0230)
DC (λ)	0.3916***	0.4090***	0.1893***	0.1905*	0.3075***	0.0577
	(0.0558)	(0.0582)	(0.0714)	(0.0997)	(0.0604)	(0.0636)
DC × Post Election	-0.0917*	-0.1141*	-0.1567**	-0.1936*	0.0180	0.0191
(γ)	(0.0543)	(0.0585)	(0.0675)	(0.1041)	(0.0618)	(0.0690)
Pop Share (%)			0.0082***	0.0080***		0.0092***
			(0.0013)	(0.0016)		(0.0012)
Pop Share			0.0015	0.0025		-0.0002
× Post Election			(0.0012)	(0.0017)		(0.0012)
NFS controls				√		
Village FEs	√	√	√	√	√	√
Year FEs	√	√	√	√	√	√
Village time trends		√	√	√	√	√
#Villages	253	253	248	213	251	246
#Observations	28,466	28,466	27,931	14,329	28,573	28,038
R-squared	0.1638	0.1862	0.2755	0.2973	0.1842	0.2801
Y mean	0.191	0.191	0.192	0.207	0.161	0.163

Notes: The dependent variable is a clan's office taking. The variable *DC* (Dominant Clan) equals one for clans with the largest size of population and maintaining an ancestral hall (AH) or compiling a genealogy (GE), and the variable *Post Election* equals one for years following the introduction of elections. The variable *Pop Share* is a clan's share of population in the village. *NFS controls* include the following village variables: the log average income per capita, log village population, average years of education, the share of non-farm labors, log number of people working outside the village, an indicator for poor villages and an indicator for villages that were seats of the township government. All columns present OLS estimates. Standard errors in parentheses are clustered at the village level. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. The role of competition for office holding

	The 2nd DC			Share of DCs		
	(1)	(2)	(3)	(4)	(5)	(6)
	yes	no	Whole sample	>50%	<=50%	Whole sample
Post Election	0.0227	0.0098	-0.0003	-0.0047	-0.0018	-0.0006
	(0.0399)	(0.0380)	(0.0256)	(0.0358)	(0.0313)	(0.0238)
DC	0.2248**	0.3467*	0.3652**	0.2160**	0.3328**	0.5637**
	(0.0905)	(0.1968)	(0.1813)	(0.0942)	(0.1338)	(0.2291)
DC × Post Election	-0.1447*	-0.2473	-0.2307	-0.1554*	-0.1788	-0.2600
	(0.0871)	(0.1534)	(0.1477)	(0.0906)	(0.1083)	(0.2066)
DC × 2nd DC			-0.1801			
			(0.1834)			
DC × 2nd DC			0.0589			
× Post Election			(0.1508)			
DC × Share of DCs						-0.4135
						(0.2517)
DC × Share of DCs						0.1182
× Post Election						(0.2308)
Controls	√	√	√	√	√	√
#Villages	99	132	231	98	150	248
#Observations	11,499	15,367	26,866	10,617	17,314	27,931
R-squared	0.2635	0.2449	0.2484	0.3290	0.2443	0.2772
Y mean	0.201	0.173	0.185	0.210	0.180	0.192

Notes: The dependent variable is a clan's office taking. The variable *2nd DC* equals one for the 2nd largest clans maintaining an AH or compiling a GE, and the variable *Share of DCs* is a share of possessing AHs or GEs for the largest four clans. Other variables are the same with the last table. *Controls* includes village fixed effects, year fixed effects, village-specific time trends, clan's population share, alone and interacted with an indicator for years after the introduction of an election. All columns present OLS estimates. Standard errors in parentheses are clustered at the village level. *** p<0.01,** p<0.05,* p<0.1.

Table 4. Elections and per-capita landholdings: econometric results

	(1)	(2)	(3)	(4)	(5)
Post Election (β)	-0.1148***	-0.0560***	-0.0755***	-0.0774***	-0.0750***
	(0.0208)	(0.0216)	(0.0226)	(0.0237)	(0.0250)
DC (λ)	0.0480*	0.0557*	0.1339***	0.1308**	0.1474***
	(0.0296)	(0.0312)	(0.0518)	(0.0522)	(0.0503)
DC × Post Election (γ)	-0.0624*	-0.0762**	-0.1637***	-0.1584**	-0.1719***
	(0.0324)	(0.0353)	(0.0613)	(0.0618)	(0.0597)
Pop Share (%)			-0.0018**	-0.0017**	-0.0020***
			(0.0007)	(0.0007)	(0.0008)
Pop Share × Post Election			0.0019**	0.0019**	0.0021**
			(0.0009)	(0.0009)	(0.0009)
NFS village controls				√	√
NFS HH controls					√
Village FEs	√	√	√	√	√
Year FEs	√	√	√	√	√
Village time trends		√	√	√	√
#Households	2106	2106	2106	2106	2016
#Observations	38,255	38,255	38,255	37,897	36,139
R-squared	0.0687	0.0891	0.0894	0.0929	0.1143
Y mean	1.093	1.093	1.093	1.095	1.100

Notes: The dependent variable is the per-capita landholdings. The independent variables are explained in Table 2. *NFS* village controls include the log average income per capita, log village population, average years of education, the share of non-farm labors, log number of people working outside the village, an indicator for poor villages and an indicator for villages that were seats of the township government. *NFS* household controls include household's labor share, the schooling years of household's head, and an indicator for households with migrants. Standard errors in parentheses are clustered at the household level. *** p<0.01, ** p<0.05, * p<0.1.

Table 5. What matters more: clan dominance or the power of office?

	(1) VC or VPS	(2) VC	(3) VPS	(4) VC or VPS	(5) VC or VPS
Post Election	-0.0847	-0.0849	-0.0818	-0.0946	-0.0864
	(0.0884)	(0.0879)	(0.0827)	(0.0886)	(0.0810)
Taking Office	0.0146	-0.0310	-0.0759	0.0172	0.0982
	(0.0298)	(0.0482)	(0.0801)	(0.0285)	(0.0651)
Taking Office × Post Election	0.0373	0.0474	0.1241	0.0343	-0.0465
	(0.0453)	(0.0641)	(0.0856)	(0.0441)	(0.0764)
DC				0.1392***	0.2472***
				(0.0484)	(0.0688)
DC × Post Election				-0.1609*	-0.2713***
				(0.0886)	(0.0968)
DC ×Taking Office					-0.2221
					(0.1632)
DC ×Taking Office					0.2269
× Post Election					(0.1814)
Controls	√	√	√	√	√
#Households	2,046	2,046	2,046	2,046	2,046
#Observations	35,801	35,724	36,627	35,801	35,801
R-squared	0.0890	0.0887	0.0889	0.0895	0.0902
Y mean	1.091	1.092	1.089	1.091	1.091

Notes: The dependent variable is the per-capita landholdings. The variable *Taking Office* equals one for clans with taking the office of the VCs or the office of the VPSs. Other variables are explained in Table 4. *Controls* includes village fixed effects, year fixed effects, village-specific time trends, clan's population share, alone and interacted with an indicator for years after the introduction of an election. Standard errors in parentheses are clustered at the village level. *** p<0.01, ** p<0.05, * p<0.1.

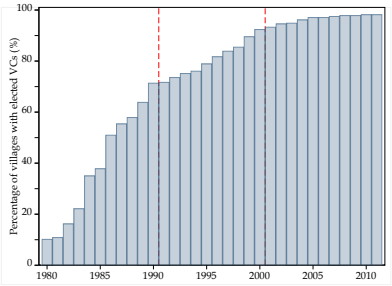
Table 6. The role of competition for per-capita landholdings

	The 2nd DC			Share of DCs		
	(1) yes	(2) no	(3) Whole sample	(4) >50%	(5) <=50%	(6) Whole sample
Post Election	-0.1874	0.0950**	-0.0714	-0.0704*	-0.1376	-0.0859
	(0.1191)	(0.0374)	(0.0790)	(0.0393)	(0.1750)	(0.0820)
DC	0.1256**	0.2156**	0.2273**	0.1548***	0.1550*	0.2438*
	(0.0497)	(0.0765)	(0.0934)	(0.0493)	(0.0809)	(0.1352)
DC × Post Election	-0.1452*	-0.0481	-0.0542	-0.1940**	-0.0320	0.0398
	(0.0831)	(0.0847)	(0.1110)	(0.0775)	(0.1281)	(0.3301)
DC × 2nd DC			-0.0982			
			(0.1040)			
DC × 2nd DC			-0.1177			
× Post Election			(0.1163)			
DC × Share of DCs						-0.1254
						(0.1819)
DC × Share of DCs						-0.2072
× Post Election						(0.3769)
Controls	√	√	√	√	√	√
#Households	1,143	963	2,106	1,183	803	1,986
#Observations	21,279	16,976	38,255	21,828	14,144	35,972
R-squared	0.0983	0.0872	0.0899	0.0780	0.1318	0.0896
Y mean	1.123	1.055	1.093	1.074	1.103	1.085

Notes: The dependent variable is the per-capita landholdings. The variable *2nd DC* equals one for the 2nd largest clans maintaining an AH or compiling a GE, and the variable *Share of DCs* is a share of possessing AHs or GEs for the largest four clans. Other variables are the same with Table 4. *Controls* includes village fixed effects, year fixed effects, village-specific time trends, clan's population share, alone and interacted with an indicator for years after the introduction of an election. All columns present OLS estimates. Standard errors in parentheses are clustered at the village level. *** p<0.01, ** p<0.05, * p<0.1.

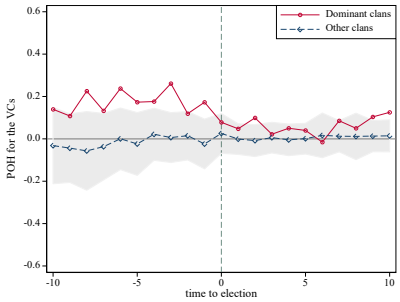
Figures

Figure 1. The introduction of elections



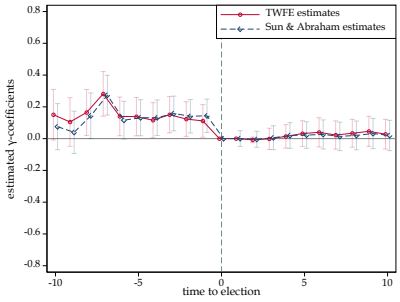
Notes: The graph shows the cumulative percentages of villages with an elected VC.

Figure 2. The Probability of office holding: dominant clans versus other clans



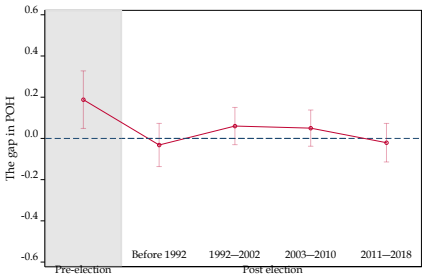
Notes: This figure shows the POHs of the DC and other clans by time-to-election, obtained from a regression controlling for a clan's share of population and NFS village controls. Shaded areas represent the 90% confidence intervals for the between-group gap in POH.

Figure 3. Elections and the gap in POH



Notes: The figure shows point estimates and their 90% confidence intervals of the coefficients γ_τ in Model (2). The solid line shows the OLS estimates, and the dashed line shows the estimates obtained using the method outlined in Sun and Abraham (2021). The procedure used to obtain these estimates is outlined in Appendix B. All coefficients are plotted relative to the first year of elections ($\tau = 0$). Standard errors are clustered at the village level.

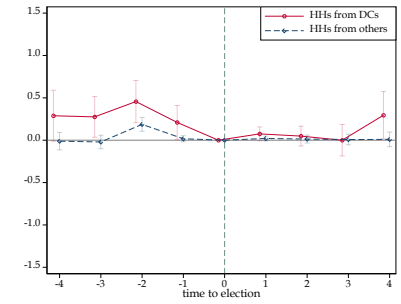
Figure 4. Elections and the gap in POH in sub-periods



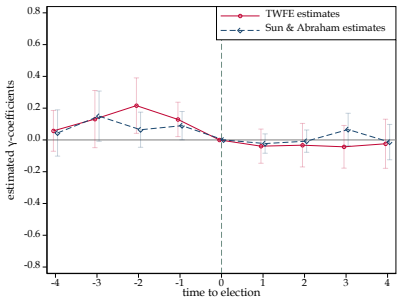
Notes: This figure shows OLS point estimates and 95% confidence intervals of the estimated DCs' advantages over other clans in POH for the VCs before and after the introduction of elections, obtained by estimating Model (1) under differences in electoral qualities.

Figure 5. Elections and the gap of HH's per-capita landholdings

(a) Landholdings of HHs from dominant and other clans, by time-to-election



(b) The gap of landholdings between the DC and other clans, by time-to-election



Notes: Panel (a) shows the three-year average household landholdings of the DC and other clans and their 90% confidence intervals, constructed from the estimates of Model (4). Panel (b) shows point the estimates and 90% confidence intervals of the coefficients γ_τ in Model (4). The solid line is the OLS estimates. The dashed line is the estimates obtained using the method of Sun and Abraham (2021). The procedure used to obtain these estimates is outlined in Appendix B. All coefficients are plotted relative to the first three-year interval following the onset of elections.

Elections Reduce Local Capture:

Evidence from Rural China

Yunnan Guo and Yang Yao

Appendix - For online publication only

Appendix A：Additional Tables and Figures

Table A1. Descriptive statistics

Variables	Source	Obs.	Mean	S.D.	Min.	Max.
V1: the first sample (1980 - 2010)						
A. Time-invariant Clan Characteristics						
Dominant Clan (DC)	VDS	1,004	0.113	0.316	0	1
The 1st largest clan (Largest Clan)	VDS	1,201	0.255	0.436	0	1
Clan with an AH	VDS	929	0.132	0.339	0	1
Clan with a GE	VDS	892	0.420	0.494	0	1
Clan with an AH or a GE (AHGE)	VDS	947	0.412	0.492	0	1
B. Clan- Year Observations						
POH for the VC	VDS	28,466	0.191	0.393	0	1
POH for the VPS	VDS	28,573	0.161	0.368	0	1
Clan share of population (Pop share)(%)	VDS	30,656	18.256	17.108	0.2	100
C. Village Elections						
Post Election	VDS	10,019	0.720	0.449	0	1
Year of 1st election	VDS	9,834	1988.5	6.736	1980	2010
V2: the second sample (1980-2010, 2011-2018)						
POH for the VC	VDS	34,580	0.181	0.385	0	1
Post Election	VDS	11,951	0.781	0.414	0	1
HH: the third sample (1986 - 2008)						
D. Village- Year observations						
Log net income per capita (1,000 yuan)	NFS	5,060	0.887	0.714	-0.831	3.756
Log village population (1,000 persons)	NFS	5,061	0.921	0.367	0.102	2.746
Average years of education	NFS	5,061	6.872	1.483	0	10.33
Village landholdings per capita (mu)	NFS	5,052	1.762	2.081	0	24.707
Share of non-farm labors (%)	NFS	5,061	45.701	25.101	0	100
Log number of people migrating out	NFS	5,061	8.642	3.078	0	12.9
Poor village	NFS	5,061	0.107	0.309	0	1
Seat of a upper-level government	NFS	5,061	0.138	0.345	0	1
E. Household's Clan Characteristics						
HHs from dominant clans	VDS&NFS	2,106	0.239	0.426	0	1
HHs from 1st clans	VDS&NFS	2,106	0.313	0.464	0	1
HHs from clans with an AH or a GE	VDS&NFS	2,106	0.377	0.485	0	1
F. Household- Year Observations						
Per-capita landholdings (mu)	NFS	38,255	1.669	1.982	0.004	35
Per-capita landholdings relative to village average	NFS	38,255	1.093	0.762	0.017	29.364
Per-labor landholdings (mu)	NFS	36,511	2.741	3.169	0.004	35
Per-labor landholdings relative to village average	NFS	36,511	1.821	1.419	0.025	48.94
Log fiscal subsidies from government (yuan)	NFS	39,501	2.593	1.781	0	6.758
Log per-capita income from production (yuan)	NFS	39,305	6.976	1.646	0	10.944
HH's population size	NFS	38,255	4.393	1.564	1	9
HH's labor share	NFS	36,496	0.657	0.216	0	1
Schooling years of HH's head	NFS	36,511	3.364	2.292	0	15
HHs with migrants	NFS	36,517	0.481	0.500	0	1

Notes: The table provides the summary statistics of the variables used by this paper and their sources. The VDS survey was conducted in three waves taking, respectively, in 2006, 2011, and 2018. The NFS has been taken annually since 1986, except for 1992 and 1994.

Table A2. DCs' advantages over other clans in POH before and after elections

Panel A: Before

	(1)	(2)	(3)	(4)	(5)
DC	0.4103***	0.4103***	0.1895**	0.1684**	0.1545*
	(0.0605)	(0.0613)	(0.0767)	(0.0839)	(0.0857)
Pop Share (%)			0.0082***	0.0078***	0.0078***
			(0.0014)	(0.0015)	(0.0015)
Large Clan				0.0341	0.0442
				(0.0555)	(0.0563)
AHGE					0.0824*
					(0.0469)
Village and Year FEs	√	√	√	√	√
Village time trends		√	√	√	√
#Villages	163	163	161	161	161
#Observations	6,141	6,141	5,997	5,997	5,874
R-squared	0.2033	0.2221	0.2807	0.2813	0.2970
Y mean	0.193	0.193	0.197	0.197	0.197

Panel B: After

	(1)	(2)	(3)	(4)	(5)
DC	0.2944***	0.2944***	0.0325	0.0105	-0.0097
	(0.0404)	(0.0406)	(0.0398)	(0.0462)	(0.0481)
Pop Share (%)			0.0097***	0.0093***	0.0091***
			(0.0007)	(0.0008)	(0.0008)
Large Clan				0.0331	0.0449
				(0.0327)	(0.0335)
AHGE					0.0488
					(0.0436)
Village and Year FEs	√	√	√	√	√
Village time trends		√	√	√	√
#Villages	251	251	246	246	246
#Observations	22,325	22,325	21,934	21,934	21,204
R-squared	0.1677	0.1931	0.2907	0.2913	0.3008
Y mean	0.190	0.190	0.190	0.190	0.193

Notes: The dependent variable, *VC*, is = 1 if the *VC* is coming from the clan *i* in village *v* at time *t* and = 0 otherwise. The variable *DC* (Dominant Clan) equals one for clans with the largest size of population and maintaining an ancestral hall (AH) or compiling a genealogy (GE), and the variable *Pop Share* is the clans' share of population. The variable *Large Clan* equals one for clans with the largest size of population, and the variable *AHGE* equals one for clans with possessing an AH or GE. All columns present OLS estimates. Standard errors in parentheses are clustered at the village level. *** p<0.01, ** p<0.05, * p<0.1.

Table A3. Elections and the gap of POH: the roles of the largest clan and clan cohesion

	(1)	(2)	(3)	(4)
Post Election	0.0147	0.0398	0.0365	0.0129
	(0.0234)	(0.0264)	(0.0263)	(0.0283)
DC				0.1482*
				(0.0824)
DC × Post Election				-0.1560*
				(0.0856)
Largest Clan	0.0902*		0.0992*	0.0483
	(0.0509)		(0.0510)	(0.0549)
Largest Clan × Post Election	-0.0539		-0.0584	-0.0045
	(0.0529)		(0.0530)	(0.0611)
AHGE		0.0973**	0.1063***	0.0720*
		(0.0390)	(0.0388)	(0.0401)
AHGE × Post Election		-0.0516*	-0.0570**	-0.0193
		(0.0268)	(0.0271)	(0.0331)
Pop Share	0.0086***	0.0103***	0.0083***	0.0077***
	(0.0013)	(0.0010)	(0.0013)	(0.0014)
Pop Share × Post Election	0.0008	-0.0003	0.0008	0.0015
	(0.0013)	(0.0010)	(0.0013)	(0.0013)
Village and year FEs	√	√	√	√
Village time trends	√	√	√	√
#Villages	248	248	248	248
#Observations	27,931	27,078	27,078	27,078
R-squared	0.2743	0.2829	0.2853	0.2866
Y mean	0.192	0.194	0.194	0.194

Notes: The dependent variable, *VC*, is = 1 if the *VC* is coming from the clan *i* in village *v* at time *t* and = 0 otherwise. The variable *DC* (Dominant Clan) equals one for clans with the largest size of population and maintaining an ancestral hall (AH) or compiling a genealogy (GE), and the variable *Post Election* equals one for years following the introduction of an election. The variable *Pop Share* is a clan's share of population in the village, and the variable *Largest Clan* equals one for clans with the largest size of population in the village. The variable *AHGE* equals one for clans with possessing an AH or GE. All columns present OLS estimates. Standard errors in parentheses are clustered at the village level. *** p<0.01, ** p<0.05, * p<0.1.

Table A4. Elections and the gap in POH for the VCs: controlling for additional fixed effects

	(1)	(2)	(3)	(4)
Post Election	0.0010	0.3875***	0.3898***	0.1574**
	(0.0242)	(0.0327)	(0.0324)	(0.0772)
DC	0.1893***	0.1895**	0.1879**	0.1039
	(0.0714)	(0.0760)	(0.0819)	(0.1057)
DC × Post Election	-0.1567**	-0.1570**	-0.2063**	-0.2649**
	(0.0675)	(0.0746)	(0.0901)	(0.1168)
Pop Share	0.0082***	0.0082***	0.0082***	0.0080***
	(0.0013)	(0.0014)	(0.0014)	(0.0017)
Pop Share × Post Election	0.0015	0.0015	0.0015	0.0024
	(0.0012)	(0.0014)	(0.0014)	(0.0019)
NFS controls				√
NFS controls × Year FEs				√
Village and year FEs	√	√	√	√
Village time trends	√	√	√	√
Village FEs × Post Election		√	√	√
DC × Year FEs			√	√
#Villages	248	248	248	213
#Observations	27,931	27,931	27,931	14,329
R-squared	0.2755	0.2847	0.2863	0.3056
Y mean	0.192	0.192	0.192	0.207

Notes: The dependent variable, *VC*, is = 1 if the *VC* is coming from the clan *i* in village *v* at time *t* and = 0 otherwise.The variable *DC* (Dominant Clan) equals one for clans with the largest size of population and maintaining an ancestral hall (AH) or compiling a genealogy (GE), and the variable *Post Election* equals one for years following the introduction of an election. The variable *Pop Share* is a clan's share of population in the village. *NFS controls* include the log average income per capita, log village population, average years of education, the share of non-farm labors, log number of people working outside the village, an indicator for poor villages and an indicator for villages that were seats of the township government. All columns present OLS estimates. Standard errors in parentheses are clustered at the village level. *** p<0.01,** p<0.05,* p<0.1.

Table A5. Elections and the gap in POH: Robustness to AHs or GEs

	(1)	(2)	(3)	(4)	(5)	(6)
	AHs or GEs built before 1978			GEs starting from 1978		
Post Election	0.0271*	0.0022	-0.0016	0.0269*	0.0028	-0.0022
	(0.0160)	(0.0241)	(0.0351)	(0.0160)	(0.0242)	(0.0351)
DC	0.4080***	0.1863**	0.1899*	0.4047***	0.1779**	0.1895*
	(0.0587)	(0.0723)	(0.0997)	(0.0591)	(0.0729)	(0.0997)
DC × Post Election	-0.1179**	-0.1624**	-0.2025*	-0.1144*	-0.1580**	-0.2090**
	(0.0593)	(0.0684)	(0.1045)	(0.0597)	(0.0693)	(0.1047)
Pop Share		0.0082***	0.0080***		0.0083***	0.0080***
		(0.0013)	(0.0016)		(0.0013)	(0.0016)
Pop Share × Post Election		0.0015	0.0025		0.0015	0.0026
		(0.0012)	(0.0017)		(0.0012)	(0.0017)
NFS controls			√			√
Village and year FEs	√	√	√	√	√	√
Village time trends		√	√		√	√
#Villages	253	248	213	253	248	213
#Observations	28,389	27,854	14,284	28,357	27,822	14,263
R-squared	0.1856	0.2758	0.2977	0.1837	0.2748	0.2958
Y mean	0.190	0.191	0.206	0.189	0.190	0.205

Notes: The dependent variable, *VC*, is = 1 if the *VC* is coming from the clan *i* in village *v* at time *t* and = 0 otherwise. The variable *DC* (Dominant Clan) equals one for clans with the largest size of population and maintaining an ancestral hall (AH) or compiling a genealogy (GE), and the variable *Post Election* equals one for years following the introduction of an election. The variable *Pop Share* is a clan's share of population in the village. *NFS controls* include the log average income per capita, log village population, average years of education, the share of non-farm labors, log number of people working outside the village, an indicator for poor villages and an indicator for villages that were seats of the township government. All columns present OLS estimates. Standard errors in parentheses are clustered at the village level. *** p<0.01,** p<0.05,* p<0.1.

Table A6. Erosion of electoral quality

	(1)	(2)	(3)	(4)	(5)	(6)
Post Election	0.0254	0.0076	0.0113	0.0071	0.0061	0.0101
	(0.0162)	(0.0240)	(0.0240)	(0.0240)	(0.0240)	(0.0240)
DC	0.4061***	0.1862***	0.1849***	0.1867***	0.1887***	0.1881***
	(0.0576)	(0.0711)	(0.0711)	(0.0711)	(0.0712)	(0.0712)
DC × Post Election	-0.1311**	-0.1669**	-0.2205***	-0.1623**	-0.1549**	-0.2199***
	(0.0587)	(0.0669)	(0.0761)	(0.0696)	(0.0665)	(0.0762)
DC × Post Election			0.0681			0.0919**
× Post 1992			(0.0489)			(0.0454)
DC × Post Election				-0.0098		-0.0101
× Post 2002				(0.0454)		(0.0436)
DC × Post Election					-0.0579	-0.0706**
× Post 2010					(0.0388)	(0.0328)
Pop Share		0.0082***	0.0082***	0.0082***	0.0082***	0.0082***
		(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)
Pop Share × Post Election		0.0011	0.0011	0.0011	0.0011	0.0011
		(0.0012)	(0.0012)	(0.0012)	(0.0012)	(0.0012)
Controls	√	√	√	√	√	√
#Villages	251	246	246	246	246	246
#Observations	34,580	34,005	34,005	34,005	34,005	34,005
R-squared	0.1759	0.2616	0.2619	0.2616	0.2619	0.2625
Y mean	0.181	0.182	0.182	0.182	0.182	0.182

Notes: The dependent variable, *VC*, is = 1 if the *VC* is coming from the clan *i* in village *v* at time *t* and = 0 otherwise. The variable *DC* (Dominant Clan) equals one for clans with the largest size of population and maintaining an ancestral hall (AH) or compiling a genealogy (GE), and the variable *Post Election* equals one for years following the introduction of an election. The variable *Pop Share* is the clans' share of population. The variables *Post 1992*, *Post 2002*, *Post 2010* equal one for years following the year 1992, 2000 and 2010, respectively. *Controls* include village fixed effects, year fixed effects, and village-specific time trends. All columns present OLS estimates. Standard errors in parentheses are clustered at the village level. *** p<0.01, ** p<0.05, * p<0.1.

Table A7. Elections and the gap in per-capita landholdings: Robustness Checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Baseline	Additional FEs			AHs or GEs built before 1978		Landholdings per labor		Village-level clusters		
Post Election	-0.0755***	-0.0797***	-0.0883***	0.6900***	-0.0797***	0.6900***	-0.1131**	1.6287***	-0.0797	-0.0883	0.6900
	(0.0226)	(0.0228)	(0.0229)	(0.1053)	(0.0228)	(0.1053)	(0.0441)	(0.2178)	(0.0762)	(0.0827)	(0.5217)
DC	0.1339***	0.1986**	0.1206**	0.1055**	0.1986**	0.1055**	0.3618***	0.2250***	0.1986**	0.1206***	0.1055***
	(0.0518)	(0.0799)	(0.0519)	(0.0532)	(0.0799)	(0.0532)	(0.1371)	(0.0835)	(0.0744)	(0.0365)	(0.0299)
DC × Post Election	-0.1637***	-0.1576**	-0.1428**	-0.1186*	-0.1576**	-0.1186*	-0.3226***	-0.2617***	-0.1576**	-0.1428**	-0.1186*
	(0.0613)	(0.0781)	(0.0613)	(0.0611)	(0.0781)	(0.0611)	(0.1162)	(0.0923)	(0.0666)	(0.0664)	(0.0627)
DC × Year FEs		√			√		√		√		
DV × Year FEs			√							√	
NFS controls				√		√		√			√
NFS controls × Year FEs				√		√		√			√
#Households	2,106	2,106	2,106	2,106	2,106	2,106	2,016	2,016	2,106	2,106	2,106
#Observations	38,255	38,255	38,255	37,897	38,255	37,897	36,511	36,154	38,255	38,255	37,897
R-squared	0.089	0.091	0.096	0.109	0.091	0.109	0.125	0.142	0.091	0.096	0.109
Y mean	1.093	1.093	1.093	1.095	1.093	1.095	1.097	1.100	1.093	1.093	1.095

Notes: The dependent variable is the per-capita landholdings. The variable *DC* (Dominant Clan) equals one for clans with the largest size of population and maintaining an ancestral hall (AH) or compiling a genealogy (GE), and the variable *Post Election* equals one for years following the introduction of an election. The variable *DV* (Dominant Village) equals one for villages associated with a dominant clan. All specifications include village and year fixed effects, village-specific time trends, and the clan's population share, alone and interacted with an indicator for years following the introduction of an election. Columns 2, 3 and 4 includes additional fixed effects; columns 5 and 6 are estimated on a restrictive data set that comprises AHs or GEs built before 1978; columns 7 and 8 are estimated by using the per-labor landholdings rather than the per-capita landholdings as a dependent variable; column 9, 10 and 11 presents standard errors clustered at the village level, and other columns report standard errors clustered at the household level. *NFS controls* include the log average income per capita, log village population, average years of education, the share of non-farm labors, log number of people working outside the village, an indicator for poor villages and an indicator for villages that were seats of the township government. *** p<0.01, ** p<0.05, * p<0.1.

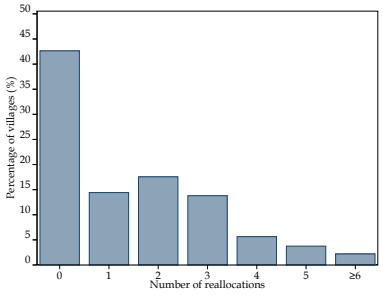
Table A8. Elections and other captures

	Log fiscal subsidies from government			Log per capita income from production		
	(1)	(2)	(3)	(4)	(5)	(6)
Post Election	-0.2244***	-0.2404***	-0.2712***	-0.0661*	-0.1371***	-0.1240***
	(0.0272)	(0.0285)	(0.0324)	(0.0374)	(0.0416)	(0.0420)
DC	0.0554*	0.0927*	0.0579	0.1869***	0.3964***	0.4477***
	(0.0284)	(0.0552)	(0.0552)	(0.0507)	(0.0785)	(0.0744)
DC × Post Election	-0.0978***	-0.1792***	-0.1393**	-0.2653***	-0.6274***	-0.6663***
	(0.0372)	(0.0665)	(0.0658)	(0.0655)	(0.1054)	(0.1020)
Pop Share (%)		-0.0008	-0.0014		-0.0045***	-0.0069***
		(0.0011)	(0.0012)		(0.0014)	(0.0013)
Pop Share ×		0.0018	0.0027**		0.0079***	0.0100***
Post Election		(0.0011)	(0.0012)		(0.0016)	(0.0015)
NFS village controls			√			√
NFS HH controls			√			√
Village FEs	√	√	√	√	√	√
Year FEs	√	√	√	√	√	√
#Households	2106	2106	2016	2106	2106	2016
#Observations	39,501	39,501	37,203	39,305	39,305	37,129
R-squared	0.6259	0.6260	0.6331	0.2917	0.2929	0.3266
Y mean	2.593	2.593	2.571	6.976	6.976	6.941

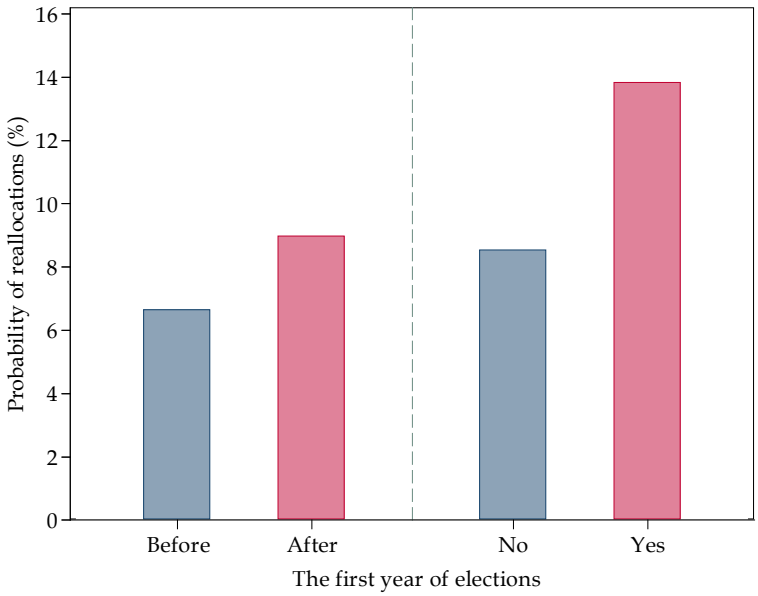
Notes: The dependent variable in columns (1)-(3) is the log of household's fiscal subsidies from government, and the dependent variable in columns (4)-(6) is the log of household's per capita income from production. Other variables are explained in Table 4. Standard errors in parentheses are clustered at the household level. *** p<0.01,** p<0.05,* p<0.1.

Figure A1. Large-scale Land Reallocations

(a) The distribution of the number of reallocations in the period 1986 - 2008

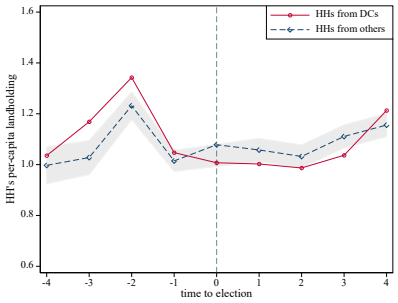


(b) The probability of reallocations and the first year of elections



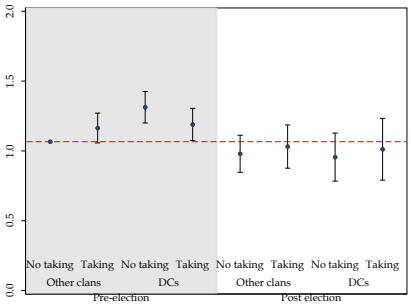
Notes: Panel (a) shows the percentage of villages undertaking large-scale land reallocations in the period 1986-2008, by number of reallocations. Panel (b) shows the probability that a large-scale land reallocation happened by the first year of elections.

Figure A2. HHs' per-capita landholdings: DCs vs other clans



Notes: The figure shows the three-year moving averages of per-capita landholdings of the DCs and other clans by time-to-election. Shaded areas represent 90% confidence intervals for the between-group gap.

Figure A3. Household per-capita landholdings: dominant clans, office taking and elections



Notes: This figure shows that the average per-capita landholdings of households from DCs and other clans during the periods before and after elections under two circumstances: when their clans are taking office and when their clans are not taking office. Spikes represent 90% confidence intervals for the difference in mean landholdings across groups relative to the first group. Village fixed effects, year fixed effects, village-specific time trends, clan's population share, alone and interacted with an indicator for years after the introduction of an election are controlled for. Standard errors are clustered at the village level.

Appendix B: Robustness Checks for Dynamic Differences-in-Differences Estimators

A number of recent articles have concerned that treatment effects may be heterogeneous across time periods or across units within a time period. This can lead to some units receiving negative weights when their outcomes are aggregated to produce treatment effects, which can be bias the estimates. Here, we outline two of the proposed solutions to this issue in recent literature and show that our results are robust to the use of two methods.

Appendix B.1 Sun and Abraham (2021)

Our main alternative approach consists in the use of the "interaction-weighted estimator" proposed by Sun and Abraham (2021, SA henceforth). We adapt their approach to estimate our parameters as follows:

1. We define a cohort e as the set of clans residing in a village that occurred an election in a given year. This give us 28 cohorts from 1980 to 2010. The last treated cohort is used as the control group. We index clans with i and a relative time period as τ (so that τ represents the periods before and after treatment).

2. We estimate the *cohort-specific average treatment effect (CATT)* using a linear two-way fixed effects specification that interacts relative period indicators with cohort indicators:

$$VC_{ivt} = \eta_v + \delta_t + \sum_{e \notin C} \sum_{\tau \neq 0} \gamma_{e,\tau} I(t - election_v = \tau) \cdot domclan_{iv} \cdot (E_i = e) + \varepsilon_{ivt}$$

where C is the last-treated cohort (treated after 2010).

3. We calculate the weights for each period, $\hat{\square}(E_i = e \mid E_i \in (-\tau, T-\tau))$, using the sample shares of each cohort in the given relative time period τ.

4. We combine the $CATT$ estimates and the weights to calculate what Sun and Abraham call the "interaction-weighted" estimate:

$$\hat{\gamma}_\tau = \frac{1}{|g|} \sum_{\tau \in g} \sum_{e} \hat{\gamma}_{e,\tau} \hat{\square}(E_i = e \mid E_i \in (-\tau, T-\tau))$$

Sun and Abraham (2021) show that the differences-in-differences estimator for $CATT$, $\hat{\gamma}_{e,\tau}$, is consistent in the presence of parallel trends.

We apply these steps to the event studies shown in our paper. The results are shown in Figure 3, Figure 5 Panel b, and Appendix Figure A5 (the dashed lines).

Appendix B.2 Borusyak, Jaravel, and Spiess (2024)

Next, we consider the "imputation estimator" proposed by Borusyak et al. (2024) as another check of the robustness of our results. This approach consists of the following steps:

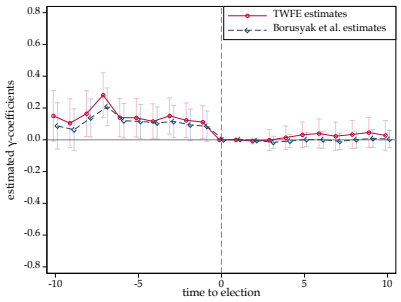
1. We estimate β_τ in Model (2) following the method outlined by Borusyak et al. (2024), separately for dominant clans (g=1) and other clans (g=0):

$$VC_{ivt} = \eta_v + \delta_t + \sum_{\tau=-10}^{10} \beta_\tau^g I(t - election_v = \tau) + \varphi' Z_{ivt} + \varepsilon_{ivt}, \quad g \in \{1, 0\}$$

2. We estimate γ_τ in Model (2) as $\beta_\tau^1 - \beta_\tau^0$ for the lags and leads, along with bootstrapped confidence intervals.

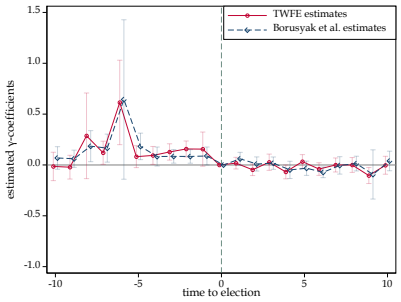
Estimates using this procedure are shown in Appendix Figures B1 and B2 (the dashed lines).

Figure B1. The gap in POH, by time-to-election, Borusyak, Jaravel, and Spiess (2024) approach



Notes: Point estimates and 90% confidence intervals of the γ-coefficients in Model (2). The solid line shows OLS estimates. The dashed line shows the estimates using the method outlined in Borusyak, Jaravel, and Spiess (2024). All coefficients are plotted relative to the first year of elections ($\tau = 0$). Standard errors are clustered at the village level.

Figure B2. Per-capita Landholdings, by time-to-election, Borusyak, Jaravel, and Spiess (2024) approach



Notes: this figure shows the point estimates and 90% confidence intervals of the event study coefficients of landholdings, like γ-coefficients in Model (4). The solid line shows OLS estimates. The dashed line shows the estimates using the method outlined in Borusyak, Jaravel, and Spiess (2024). All coefficients are plotted relative to the first year of elections ($\tau = 0$). Standard errors are clustered at the village level.