

Social Embeddedness, Power Balance, and Rural Governance in China

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Abstract: This research reconciles the positive and negative perspectives of the role of informal institutions in local governance. It argues that local governance outcomes are jointly determined by social embeddedness — the extent to which local community leaders connect with their community members through informal ties, and power balance — the extent to which political power is balanced among local ruling elites to prevent it being capture by informal groups. Using a four-round survey (2005-2016) in rural China, we find that where village officials are more socially embedded and political power is monopolized by a clan, rural households received lower land-taking compensation, administrative expenditure increased, and public investment, although increasing, were unable to meet the public’s needs. Three mechanisms are at work: village officials from the monopolized ruling clan are better able to fragment collective resistance, buy off aggrieved villagers, and collude with the state.

Keywords: Informal institutions; social embeddedness; balance of power; lineages/clans; local governance; China.

1 Introduction

Informal institutions matter significantly for local governance.¹ Traditional leaders, norms, and practices are effective in providing public goods and services in developing countries such as in Africa ([Baldwin, 2016](#)), Asia ([Tsai, 2007](#)), and Latin America ([Magaloni, Díaz-Cayeros and Ruiz Euler, 2019](#)), maintaining social order and stability at the local level in fragile states such as Afghanistan ([Murtazashvili, 2016](#)), and providing security, law and order in stateless Somalia ([Leeson, 2007](#)). These studies provide empirical evidence to important work by [North \(1990\)](#), [Ostrom \(1990\)](#), and [Scott \(1990\)](#) which emphasizes the importance and success of endogenously developed informal institutions to solve a variety of local problems, and the potential for unintended and undesirable outcomes when formal institutions dismiss local informal institutions. In contrast, informal institutions are also linked to clientelism, corruption, and abuse of power, which undermine the performance of formal democratic, state, and market institutions at the local level ([Stokes et al., 2013](#); [Collins, 2004](#)). This leads to local elite capture whereby the bulk of public resources benefit disproportionately the influential individuals or groups in the community that have strong connections with local politicians ([Acemoglu, Reed and Robinson, 2014](#); [Mattingly, 2016](#)). Increased spending and foreign aid in public goods and services is ineffective to reach the intended beneficiaries ([Reinikka and Svensson, 2004](#)).

In this paper, we develop a theory to reconcile the positive and negative perspectives of the role of informal institutions in local governance. We argue that social embeddedness and power balance jointly affect local governance outcomes. By social embeddedness, we mean the extent to which local community leaders connect with their community members through informal ties. By power balance, we mean the extent to which political power

¹See a review article by [Helmke and Levitsky \(2004\)](#).

is balanced among local ruling elites to prevent it being capture by informal groups. Social embeddedness alone is associated with mixed local governance outcomes, which can be sorted out by considering how informal institutions shape the structure of political power through local ruling elites. Where formal political power is monopolized by an informal organization, socially embedded local officials can use their informal networks to fragment collective resistance and are more likely to collude with their superiors in the state authority. Local governance deteriorates as a result. Where political power is more equally shared, local governance improves because socially embedded local leaders face more intra-elite competition for winning broad support from different social constituent bases and have plural interests to satisfy, which induces more inclusive policies and governing strategies. Doing so boosts social monitoring, improves their accountability, and makes collusion with their superiors less likely.

We test our theory by examining how informal lineage groups interact with formal political power to influence village governance in China. Lineage groups or clans are the primary form of informal institutions in rural China.² They vary with the group size: large clans have more members and more resources under their control, are better organized, and are more respected by villagers both inside and outside the clan than small clans. Using a four-round survey of both elites and households in rural China from 2005 to 2016, we find that village officials whose power is oligopolistically shared by two large clans distributed higher compensation to land-dispossessed households for their land loss and increased public expenditure. In contrast, village officials whose power is monopolized by one large clan are associated with undesirable governance outcomes: lower land-taking compensation; increased administrative expenditure; and public investment, although increasing, unable to meet the public's demand. These results remain robust to the inclusion of locality and time fixed effects, other controls, and 2SLS estimation.

We also identify the mechanisms through which social embeddedness and power balance jointly produce varied governance outcomes, especially when the interest of the state is inconsistent with that of rural households. When village officials are more socially embedded and their power is monopolized by the clan to which they belong, they can use their influence over clan networks to suppress the occurrence of collective resistance and buy off aggrieved households. They prioritize state policies over the interest of rural households, bringing about harmful governance outcomes to their community members. They are also more likely to collude with the local state authority. This collusion gives them privileges to receive various rewards from the state, including individual material benefits, more funds allocation, and brighter prospects of career advancement. In contrast, when village officials are more socially embedded and their power is more fractionalized, neither power holder is strong enough to block collective resistance and pacify aggrieved households. Popular pressure from below promotes accountability and forces village officials to improve governance.

The situation where informal institutions — for example, chiefs, clans, kinship and indigenous groups — engage in community governance is common across the globe. Our research helps clarify the contradictory conventional wisdom on the roles of informal institutions in local governance. [Bhavnani and Lee \(2018\)](#) argue that locally embedded bureaucrats enhance public goods provision when local conditions favors accountability, notably high literacy and newspaper circulation. Our research complements their study by specifying the effect of social embeddedness is conditional on the balance of power among local ruling elites. Intra-elite competition and checks and balances reduce the

²Lineage and clans are used interchangeably in this paper.

likelihood that political power is biased toward a particular informal group. Our research is reminiscent of “embedded autonomy” conceptualized by Peter Evans (1995) which finds that developmental states features a bureaucracy that is socially embedded in the private sector but preserves sufficient distance from it to prevent from being captured. Our focus on the balance of power among socially embedded ruling elites is also in line with recent work by Acemoglu, Reed and Robinson (2014) which argues that greater political competition brought about by more ruling families in a chieftaincy induces chiefs to promote local development in rural Sierra Leone. Cruz, Labonne and Querubin (2020) find that villages with more fragmented social networks are associated with more public goods provision and political competition in the Philippines because social cohesion allows clan leaders to be more effective in capturing politicians. Our research complements this body of research by showing that local leaders from fractionalized clan backgrounds improve governance outcomes under an authoritarian context.

Governance outcomes in our analysis concern protection of property rights to land, the most important resource in rural areas, and public goods provision. They both capture important aspects of rural governance and, more importantly, they represent distinctively different relations between the state and rural households in local governance. The task of public goods provision is less demanding to local leaders in the sense that while local people certainly welcome more public goods provision, the pressure from the state authority on local community leaders to provide them is weak, if not completely absent. In contrast, the state has a strong interest in expropriating land to generate revenue and/or fuel development while rural households strive to protect their properties. Thus, protection of land property rights represents a context where local community leaders face conflicting demands from the state above and from ordinary citizens below. When private property protection and public goods provision each as a governance outcome is examined alone, as in most previous studies, it is unclear if the arguments developed from one governance context remain valid in the other context. Our research places the two different types of governance outcomes in a unified framework and the findings are expected to be more robust to a variety of governance contexts.

2 Social embeddedness, power balance, and local governance

Previous studies discover that social embeddedness promotes community leaders to improve local public goods provision because it generates norms and moral obligations for local leaders to serve their community (Tsai, 2007), enhances civic engagement in decision-making processes and lowers monitoring and sanctioning cost (Magaloni, Díaz-Cayeros and Ruiz Euler, 2019), and because traditional leaders have longer time horizon than politicians and hence are more committed to local development (Baldwin, 2019).

These studies have some limitations when seeing from the local governance perspective. While social embeddedness could tie the hands of local leaders as the literature above finds, it also provides local leaders with a resource with which to pursue personal gain or exercise social control, or both, which could be detrimental to the community development (Migdal, 2001). Shami (2019) shows that local elites could provide public goods in a way to benefit themselves and their core followings rather than serve the community as a whole in rural Pakistan. Indeed, the fact that the bulk of public expenditure is unable to reach the public but captured by local officials is a common challenge in low-income countries (Reinikka and Svensson, 2004).

In addition, community leaders can be considered as actors connecting the state

authority from above and their community members from below, both of which may impose pressure on them. Public goods provision captures a less tense relationship between the state and the public in local governance. In contexts where the reach of the state is short and/or in a democracy where elections serve as an obvious mechanism allowing voters to sanction poor-performing local leaders, the pressure for community leaders to improve public goods provision comes primarily from below. This also applies to authoritarian China where, despite its well-staffed hierarchical institutions reaching all the way down to the village level, the party/state does not really care about village public goods provision (Tsai, 2007).³

However, local governance encompasses a variety of activities — resource distributions, property extraction, dispute resolution, and conflict management, to name a few — that involve complex interest calculations and bargaining between various parties. Local leaders face more conflict of interest and trade-offs among various actors in certain types of local governance than others. This is especially the case when the state mandates are at odds with the interest of the local people, such as land expropriation in Africa (Boone, 2014) and in India (Levien, 2018), and the one-child policy in China. Where this is the case, how community leaders weigh up the situation to make choices, to act on the state mandates or protect the interest of their community members, has decisive implications on local governance outcomes.

We proposed a unified theory that explains the impact of social embeddedness on local governance. We argue that the effect of social embeddedness is conditional on the extent to which political power structures promote intra-elite competition and encourage checks and balances among local ruling elites. Check-and-balance and separation of power among local ruling elites shape the way in which local leaders handle their bottom-up pressure from community members and top-down pressure from the state. Where checks and balances and intra-elite competition are less permitted, community leaders are more able to shape public action in their favor. The heterogeneity of preferences among community members provides local leaders with an opportunity to use their social networks and clouts to fragment collective actions against state predation. This reduces the scale of public resistance and makes it less threatening. The state commands a variety of resources (e.g., allocation of funds, career advancement) with which to induce community leaders to act in accordance with the preference of the state. The ability of community leaders to defuse potentially threatening collective resistance from below emboldens them to prioritize the state’s interest over the public interest.

In contrast, where political power structures create more room for intra-elite competition and checks and balances among local ruling elites, local leaders are unlikely to monopolize political power and resources. This undermines their capability to manipulate public opinions and control over public resistance. Collusion with the state and predation of local leaders themselves or on behalf of the state are also likely to reduce because doing so increases the opportunity for public resistance, for which local leaders cannot control, and for political attack from rival local elites. Potential threat from below and political competitors force local leaders to consider plural interests and adopt more inclusive local policies and governing strategies that serve the broader interest of their community. This logic is reminiscent of Acemoglu, Reed and Robinson (2014) which finds that more ruling families in a chieftaincy produce greater political competition, fewer opportunities for the

³Tsai’s conclusion does not apply to more recent rural governance in China where massive funds were allocated to improve rural public goods provision under the national poverty alleviation campaign since 2013.

concentration and abuse of power, and better development in Sierra Leone.

3 Institutions and governance in rural China

3.1 Village political power and lineage groups

Chinese villages have two main governing bodies that are formally recognized by the state: the Village Committee (VC) led by the Village Head (VH) and the Village Communist Party Committee led by the Village Party Secretary (VPS). VCs consist of three to seven members who are popularly elected. Village elections were first introduced in the early 1980s. The Organic Law of Village Committees, implemented on a trial basis in 1987, provides a legal framework for VCs. In the early stage, elections faced opposition from the Party and state apparatuses at various levels and were implemented only selectively (O'Brien and Li, 2000). The Organic Law was fully adopted in 1998, after which time village elections became mandatory throughout China. VCs are the primary mass organization of self-government through which villagers manage their own affairs and serve their own needs (National People's Congress, 2010, Article 2). While VCs are not formally part of the state hierarchy, village officials have been increasingly bureaucratized and influenced by the state (Deng, O'Brien and Zhang, 2020).⁴

Village party committees are the organization through which the Chinese Communist Party penetrates into rural communities. In principle, the village party committee, usually the VPS, is to supervise the VH rather than be directly involved in rural governance. In practice, the VPS can wield enormous power in village governance, which causes elected village officials unable to exercise power effectively (O'Brien and Han, 2009). The co-existence of VCs and party committees forms two separate loci of power, creating a "dual-power structure" in Chinese villages (Oi and Rozelle, 2000; Guo and Bernstein, 2004). Empirical studies show that the balance of power between the two formal institutions varies across villages: the ultimate authority in village affairs can be rested on the VPS, the VH, or both in which case the VPS and VH jointly make decisions (Li, 1999; Sun et al., 2013; Cai and Sun, 2018).

Villages are also a community where members are connected through dense informal networks, the predominant form of which is the lineage. The lineage is a kin-based organization consisting of a group of people who trace their patrilineal descent back to one common male ancestor. Large lineages may contain several sub-lineages, known as segments or *fang*, which are further subdivided into branches or *zhi* (Liu and Murphy, 2006). Lineage groups emerged during late Tang-Song dynasty (618AD – 1278) and served important social and economic functions in pre-modern China. A traditional lineage had an ancestral hall where members demonstrated their respect to their ancestor and held rituals and important ceremonies and where lineage leaders arbitrated disputes; had a code of conduct to discipline members; held common property, such as land; provided members with education, relief from poverty, and other local public or club goods; collected tax and administered justice (Fei, 1946; Freedman, 1966; Greif and Tabellini, 2017). Participation in rituals and ceremonies facilitated the development of collective identity that transcends the individuals and also is important for smoothing over internal tensions and conflicts among group members (Watson, 1985).

Lineage groups survived from Mao's communist rule (1949-1976) during which time

⁴The formal administrative hierarchy consists of five levels in China: the center, province, prefecture, county and township.

the traditional lineage organizations were suppressed, their property confiscated, and their ancestral halls destroyed or abandoned.⁵ Lineage groups reemerged after 1979 and their activities have been gradually resumed (e.g., rebuilding ancestral halls, compiling genealogies, and reinventing rituals). The revival of traditional kinship-based networks strengthens the clan identity, fosters intra-clan loyalty and harmony, but simultaneously excludes outsiders from the resources controlled by clan members, thereby reinforcing the ‘us’ and ‘them’ boundaries (Liu and Murphy, 2006). The strengthen of lineages varies across regions in China, with a stronger impact in the southern and eastern regions. In post-Mao China, lineage groups organize members in securing property rights against state predation (Peng, 2004), help private firms overcome financial constraints and lead to a higher occurrence of entrepreneurship (Zhang, 2020), and provide village welfare and public goods (Tsai, 2007; Xu and Yao, 2015). Greif and Tabellini (2017) argue that the clan and the corporation are the primary social organizations sustaining cooperation in China and Europe, respectively. These social organizations influenced the institutional foundations of markets, the provision of social safety nets, legal environment, and the organization of the state, contributing to an institutional bifurcation between China and Europe.

3.2 Land expropriation

Land expropriation is perhaps the most salient issue where interests from the local government and from rural households diverge drastically in rural China. China has a dual land tenure system of state-owned urban land and collectively owned rural land. Land was allocated by the state free of charge during the command economy. Land commodification, as an integral component of economic reforms, turned land into a marketable asset, but private ownership to land remains prohibited today. Local governments at all levels quickly learned new development strategies whereby they converted massive agricultural land to establish economic development zones and to pursue real estate development (Cartier, 2001; Rithmire, 2015). Land laws grant the state the exclusive authority to expropriate rural land for urban construction while paying land-losing households compensation that is set administratively at below-market values (National People’s Congress, 2004, Article 47). Local governments retitle their expropriated land and then auction off the land in a competitive urban land market. The process of expropriating and subsequently commodifying rural land comes with a wide price discrepancy between the compensation paid to rural households and the market price of land at which local government sell to urban land users, allowing local governments to capture the arbitrage value. Beyond revenue generation, land also provides local governments with a source of collateral for bank loans (Lu and Sun, 2013) and a key instrument with which to intervene in the economy (Tao et al., 2010). These functions that land serves in the local economic development lead local governments to grow an insatiable appetite for land.

Discriminatory land laws legitimize state predation and reduce the chance for land-dispossessed households to seek legal protection in face of authorized land expropriation. Land-taking compensation funds which are calculated already at below-market values can be siphoned off for other purposes by local governments and village officials (Cai et al., 2020). Unauthorized land seizure, inadequate compensation, forced eviction, and em-

⁵Research shows that lineage groups continued to govern internal village affairs and provide their members with welfare assistance under Mao when they were formally banned (Hu, 1948; Liu and Murphy, 2006).

bezzlement of compensation funds are commonplace, escalating public grievances against land taking. Rural households take various actions to express their opposition, including individual resistance (Qiao, 2017),⁶ collective petitioning (Cai, 2003; Lu and Tao, 2017), and popular protests (Heurlin, 2016).

Village officials are placed in an awkward position in the process of land expropriation. On the one hand, local governments try to avoid confronting rural households and pass land expropriation tasks onto village officials. Compensation funds are first delivered to the Village Committee, which then distributes the funds to individual households. As a result, village officials are the frontline leaders who have direct interactions with aggrieved villagers, carry out the dirty work, and convince and sometimes force individual households to sign off on their expropriation agreement. On the other hand, village officials who are themselves members of their village may develop moral obligations to serve their community. Village elections incentivize popularly elected village officials to represent the interest of their voters (villagers). Collective resistance of land-dispossessed villagers adds additional pressure on village officials to serve their community. Empirical studies have mixed findings. Deng, O'Brien and Zhang (2020) find village officials act more as state agents to expedite land dispossession. Mattingly (2019) finds that local governments purposefully select clan leaders to be village officials in order to facilitate land expropriation. In contrast, Cai and Sun (2018) find that the interest of land-dispossessed households are better protected when popularly elected village heads hold real power vis-à-vis appointed village party secretaries in village governance.

3.3 Public goods provision

Village officials take responsibilities for provision of a wide range of village public goods, including, but not limited to, construction and maintenance of roads, sanitation, irrigation system, primary school facilities, clinics, and community recreational facilities. To generate funds and fulfill policy mandates, local governments and villages imposed various fees, levies, surcharges, and arbitrary fines on rural households throughout the 1990s (Bernstein and Lü, 2003). To reduce the excessive fiscal predation on rural households, the central government enacted the tax-for-fee reform in 2002 that eliminated local fees altogether and utilized a single agricultural tax, and then abolished the agricultural tax in 2006. These reforms eliminated the ability of rural governing bodies to generate revenue from rural households for local expenditure and forced them to depend on upper level governments for funds, which have failed to offset the revenue shortfalls of villages. As a result, rural governing bodies became less autonomous and less efficient in delivering public services and investment (Yep, 2004; Li, 2007; Luo et al., 2007). These problems are particularly severe in poorer regions. Kennedy (2007) find that some rural governing body becomes an “administrative shell” with few resources to provide even the most basic services in the poor north-west China.

With these financial difficulties, a significant number of villages rely on informal institutions on fundraising and philanthropic donations with which to finance village public projects. Tsai (2007) finds that villages that have encompassing and embedding solidary groups — such as lineage or temple groups that hold activities involving the entire community and also incorporate village officials as group members — generate strong social norms and obligations for village officials to provide public goods and services. Xu

⁶Individual holdouts or the so-called “nail households” in China who refuse to move out of their house are an example of individual resistance against land expropriation.

and Yao (2015) find that village leaders who come from the village’s two largest family clans increased local public goods expenditure, because clans help local officials overcome the collective action problem associated with financing public goods.

4 Data and Variables

4.1 Data

Data for this study is from the China Rural Development Surveys (CRDS) conducted by the Center for Chinese Agricultural Policy at the Chinese Academy of Social Sciences. The surveys were conducted four rounds from 2005 to 2016, with 3-4 years apart between each round. The country was first divided into five commonly recognized geographical regions and one province was randomly selected from each region: Jiangsu (East coast), Hebei (Central), Jilin (Northeast), Shaanxi (Northwest), and Sichuan (Southwest).⁷ Within province, localities were selected using a multistage stratified sampling strategy. Counties in each province were first stratified by per capita gross industrial output into five province-specific strata. One county was randomly selected from each stratum. In each of the county in the sample, townships were first stratified by per capita net income into two county-specific strata. One township was randomly selected from each stratum into the sample. Following the same procedure, two administrative villages – one from each township-specific stratum – was randomly selected from each township.

Within each village, surveys were conducted at both the household level and the elite level. A random sample of 20 households was selected from the household registration list in each village. One adult was randomly selected from each household. The surveys involved 3039 rural households, of which 17% were interviewed for all four rounds, 30% for three rounds, and another 30% for two rounds. The proportion of land-dispossessed household to the total households surveyed varies, ranging from 3.5% in the 2016 survey to 13.7% in the second-wave survey conducted in 2008. Village-level data was collected through the elite surveys where village officials (e.g., village party secretaries, village heads, and sometimes accountants) were interviewed. Village administrative data collected in elite surveys were also cross-validated with village official statistics where available. Trained survey enumerators, who were graduate students from local universities, conducted interviews with the survey respondents.

4.2 Variables

Our central hypothesis is that social embeddedness and power balance jointly affect local governance outcomes. Social embeddedness captures how village political actors (VH and VPS) are socially connected to villagers through their clan networks. The village elite surveys record individual demographic information of the VPS and the VH of each sample village from 1998 to 2016. Individual surnames indicate which clan individuals belong to. Social embeddedness is measured by an indicator of whether both village leaders come from a large clan (*daxing*) in the village. The identification of large versus small clans is a common knowledge for villagers and was collected through self-reports in the surveys. Those who are from large clans are considered to be more socially embedded than those from small clans. Power balance captures the extent to which village formal political power is dominated by a clan. It is measured by an indicator of whether the

⁷Fujian province was included as an additional province in two of the four rounds.

two village officials are from the same clan (*tongxing*). When the indicator equals one, political power is monopolized and more likely to be captured by the clan to which both village officials belong.

The interaction of social embeddedness and balance of power yields four scenarios of village dual-power structure and is expected to impact local governance in a way described in Table 1. Scenario A_0 where none of the lineage groups is strong enough to dominate village life is treated as our baseline throughout our analysis. Governance is expected to improve under Scenario A_2 where political power is distributed oligopolistically between the two leaders with each backed up by his large clan networks. It creates room for checks and balances and intra-elite competition, which promote accountability and induce more inclusive policies and actions. In contrast, Scenario A_3 where both leaders are from the same large clan creates a monopolized political power and minimizes checks and balances. Deteriorating governance outcomes are expected as a result.

[Table 1 is about here]

Figure 1 shows how the four scenarios of village dual-power structure developed over time. Panel (a) shows that Scenario A_0 experienced a sharp decline over time, from about 60% of total sample villages in the late 1990s to 30% in 2016, in contrast to a steady increase of Scenario A_1 . Scenarios A_2 and A_3 fluctuated within the range of 10-30%. Panel (b) show changes of dual-power structure experienced by each sample village over time.

[Figure 1 is about here]

Our dependent variables concern village governance. We first examine household compensation for loss of land, in which case village officials face conflicting interests from the local government above and land-dispossessed households below. The household surveys relied on individual self-reports to collect information on the compensation that households received and the size of acquired land. Land-taking compensation varies across localities. To measure local elite capture, we construct a variable using the monetary compensation that land-dispossessed households actually received relative to what they are supposed to receive minimally according to the minimum compensation standard set by the local county-level government, i.e., $\frac{\text{actual compensation}}{\text{min. compensation standard} \times \text{size of acquired land}}$. A lower ratio indicates extensive local elite capture. We spent months collecting corresponding official minimum compensation standards, which are publicly accessible from each local Bureau of Natural Resources website and are matched to the self-reported year of land expropriation. Households whose land was expropriated more than once are treated as separate observations in the analysis.

The second set of dependent variables focuses on village public goods provision, which is measured at the village level. We first use the most common measure, village public expenditure as a ratio to the village total expenditure. We also add public investment per capita, measured in monetary values, as another measure to capture the scale of public goods provision. Following Xu and Yao (2015), we also use village administrative expenditure as a ratio to the village total expenditure to capture the accountability of village officials. In addition, we construct a new measure, *Elite responsiveness*, to take into consideration if village public investment fits the local need. Individual households were asked in a hypothetical situation where if their village had RMB 50,000 *yuan*, how would they order their preferences over five village public investment projects, including

roads, schools, irrigation, drinking water facilities, and clinics. We aggregate these individual answers to the village level by calculating the percentage of being listed as the most preferred investment associated with each project. The one that receives the highest percentage is considered the most desired public investment project from the eyes of rural households. We then check from the elite surveys the actual village public investment in the year when surveys were conducted. To capture whether funds allocation decisions made by ruling elites reflect the public demand, we construct *Elite responsiveness*, an indicator that equals 1 if the village made an investment in the most desired project perceived by rural households.⁸

We consider two sets of controls. The first set relates to household level controls, including household size, whether a household member is a village official, education level and communist party membership of the household head, and household non-agricultural income. The inclusion of these controls is based on existing studies which find that elite capture increases with illiteracy and poverty, and those who have close connections with the elite are more likely to be beneficiaries in local resource allocation (Alatas et al., 2019). The second set relates to village-level controls, including village income per capita, fiscal capacity measured by the expenditure to revenue ratio, intergovernmental transfer (log), and dominant clan, a constructed dummy variable that equals 1 if members of the largest clan account for more than 50% of the total population. It also includes demographic information of village dual elites, including their age and experience of working in a firm.

Table 2 presents summary statistics. More detailed information on variable definition is available in Appendix Table A1.

[Table 2 is about here]

5 Methods and Results

5.1 Main results

Our baseline specification concerning property extraction is the following fixed-effect model:

$$Y_{i,v,c,t} = \beta_0 + \beta_1 S_{v,c,t} + \beta_2 P_{v,c,t} + \beta_3 S_{v,c,t} \times P_{v,c,t} + \gamma_1 X_{1,i,v,c,t} + \gamma_2 X_{2,v,c,t} + \theta_v + \eta_t + \tau_{ct} + \epsilon_{i,v,c,t} \quad (1)$$

where $Y_{i,v,c,t}$ is land-taking compensation for individual land-dispossessed household i in village v city c in year t ; S and P are two dummy variables indicating whether the dual village elites are social embedded and whether formal political power is monopolized by a clan; X_1 and X_2 are vectors of control variables at the household level and at the village level, respectively; θ_v , η_t , τ_{ct} are village, year, and city-year fixed effects; and $\epsilon_{i,v,c,t}$ is the idiosyncratic error term. The village and year fixed effects absorb unobserved time-invariant heterogeneities across villages and common shocks that affect all villages in a given year, respectively. The time fixed effects across cities can mitigate the effect of unobserved variables at the city-year level. We relax the assumption of independent and

⁸Public goods provision could be inconsistent with the public interest. For example, Chen and Kung (2016) show that local officials allocate public funds for the so-called “image” or “political achievement” projects – projects built largely for displaying local government officials’ achievements in order to impress higher authority rather than for use by ordinary people. It should also be noted that *Elite responsiveness* is unable to capture who are the direct beneficiaries of public projects because it requires more information on individual households (such as their surnames), for which our data do not provide.

identical distribution of error terms by clustering error terms at the village level. That is, the correlation of error terms exists among individuals in a given village, but not across villages.

Table 3 reports the baseline regression results. Columns 1 to 3 show the estimation results where no controls, only household-level controls, and only village-level controls are included, respectively. Column 4 shows the full model estimation results. The variables of our main interest are *Social embeddedness*, *Power balance*, and their interaction term. The coefficients cannot be interpreted directly due to the interaction term. We graph the results of Column 4, as shown in Figure 2, to aid in our interpretation. In comparison to the baseline (Scenario A_0), where the village power is shared oligopolistically between two large village clans (Scenario A_2), land-taking compensation that households received as a ratio to official compensation standards increases by 0.87; where the village power is monopolized by a large village clan (Scenario A_3), the compensation ratio decreases by 1.91. Both are statistically significant at the 1 percent level.

[Table 3 and Figure 2 are about here]

Our baseline specification concerning public goods provision uses the following fixed-effect model:

$$Y_{v,p,t} = \beta_0 + \beta_1 S_{v,p,t} + \beta_2 P_{v,p,t} + \beta_3 S_{v,p,t} \times P_{v,p,t} + \Gamma X_{v,p,t} + \theta_v + \eta_t + \tau_{pt} + \epsilon_{v,p,t} \quad (2)$$

where $Y_{v,p,t}$ is village public goods provision for village v province p in year t . In comparison to Model 1, we drop household level controls because the level of analysis is villages; we also replace city-year fixed effects with province-year fixed effects due to lack of variations of some variables.

Table 4 presents results of village public goods provision, which is measured by public expenditure (Columns 1 and 2), public investment per capita (Columns 3 and 4), administrative expenditure (Columns 5 and 6), and elite responsiveness (Columns 7 and 8). Odd-numbered columns show the results without adding village level controls; even-numbered columns show the full model estimation results, which are also visualized as Figure 3. When the village head and party secretary are both from large clans and more socially embedded (A_2 and A_3), local public goods provision are improved. Specifically, in comparison to the baseline (Scenario A_0), public investment per capita increases by RMB 420 *yuan* under A_2 and by 390 *yuan* under A_3 ; public expenditure as a ratio to total expenditure increases by 8% under A_2 . These results are consistent with Tsai (2007) and Xu and Yao (2015), which find that village elites who have strong clan networks are associated with more public goods provision.⁹ However, the results from the two additional measures show a clear difference in public goods provision between A_2 and A_3 . In comparison to the baseline A_0 , administrative expenditure as a share of total expenditure increases by 9% under A_3 , and elite responsiveness decreases by 27%, while both measures are not statistically significant for A_2 . Our interpretation is that under A_3 highly concentrated political power and lack of checks and balances lead village officials to be less constrained in administrative spending. Local public goods provision, albeit

⁹Xu and Yao (2015) find that the level of public goods expenditure was highest when the VH and the VPS came from distinct large clans (p.383-384). They conjecture that it appears a good thing if there existed some competition between VH and VPS as long as they came from one of the two largest clans (p.384, ft.25).

increasing, does not necessarily fit the need of the public. These results suggest village officials under A_3 are less accountable and less responsive to their fellow villagers.

[Table 4 and Figure 3 are about here]

5.2 Robustness checks

Our independent variables may be correlated with omitted variables that influence governance outcomes through other channels. One such consideration could be village elections. Previous survey research shows that village elections enhanced accountability of village leaders (Manion, 1996; Kennedy, Rozelle and Shi, 2004) and increased the expenditure on public goods and services provision (Luo et al., 2007; Martinez-Bravo et al., 2011; Wang and Yao, 2007). Village elections were implemented selectively and had a large variation across localities when they were first introduced. Under the 1998 amended Organic Law, elections became mandatory every three years and certain qualities of elections (e.g., the number of candidates greater than the number of positions to be filled, secret ballot, open vote-counting, etc.) must be met throughout China. Many election-related measures, which were used in previous studies, produce no variation in more recent datasets. To gauge the quality of village elections, we adopt two measures, proxy voting and roving ballot boxes, both of which are constructed dummy variables. The related questions concerning the quality of the most recent election were included in the 2005 and 2008 surveys only, and this reduces the number of observations (villages) by half. As an imputation strategy, we extend the data on election quality by one more round of elections. That is, the data on the most recent election prior to 2005 is used for the most recent two elections prior to 2005, and the data on the most recent election prior to 2008 is also used for one more round of elections after 2008. The assumption is that these election related arrangements are institutionalized and are expected to have certain durability over a few years. We acknowledge that this strategy produces measurement errors. This is also why the quality of elections is not included as controls in our baseline analysis. Table 5 shows that the results of our variables of interest, *Social embeddedness*, *Power balance*, and their interaction term, remain robust after controlling for the quality of elections. Better quality elections where proxy voting and roving ballot boxes are both prohibited increase land-taking compensation that rural households received; however, our empirical analysis do not support a positive relationship between the quality of elections and public goods provision.

[Table 5 is about here]

Another concern is that both the independent variables and governance outcomes may be caused by some omitted variables. For example, Su et al. (2019) find China’s land-driven urbanization has undermined the quality of village democracy, because local governments have incentive to manipulate village elections so as to increase the chance for their preferred more compliant candidates to win the elections and ultimately to help them facilitate land expropriation. To address the endogeneity concerns, we use the clan identity of spouses of the VH and the VPS to construct nine instrumental variables, including whether the spouse of VH (or VPS) is from a large clan, whether she/he is from the same clan as the VPS (or VH), the interaction between the two variables, whether the spouse of VH and the spouse of VPS are both from a large clan, whether they both from the same clan, and the interaction between the last two variables. Our selection of

instruments is based on the consideration that elite spouse’s clan does not directly affect village governance outcomes, and it can do so only through village elites.¹⁰ Elite spouse information used for constructing our instruments was included in the 2008 survey only, and this reduces the number of observations (villages) by more than 40%. As a result, we include year and city-year fixed effects but not village fixed effects in analysis due to lack of variation across villages. Table 6 reports the two-stage least squares (2SLS) estimation results. Given F value = 15.8, we reject the hypothesis that our instruments are weak. The p -value for the over-identification test is 0.225 and the null hypothesis that the over-identifying restrictions are valid cannot be rejected. The 2SLS results, visualized in Figure 4, shows that our findings where land-dispossessed households received less land-taking compensation when power is monopolized by a large clan remain robust. We also perform a least absolute shrinkage and selection operator (LASSO) regression analysis which selects five out of the nine instruments. The LASSO regression results, reported in Appendix Table A6, remain robust. Another source of endogeneity is reverse causality. In this case, the dependent variable household land-taking compensation may affect the future power configuration between the two village leaders. To test it, we regress the power configuration (i.e., the four scenarios from A_0 to A_3) at year t on the average household land-taking compensation at $t - 1$ using the multinomial probit model. The non-significant coefficients associated with the average land-taking compensation, as shown in Appendix Table A6, reduce the reverse causality concern.

[Table 6 and Figure 4 are about here]

In addition, Hainmueller, Mummolo and Xu (2019) warn that findings based on multiplicative interaction models can be fragile and model dependent. We use their statistical software package, *interflex*, to diagnose our interaction models. The results, presented in Appendix A1, support the validity of the linear interaction effect assumption of our interaction models.

6 Mechanisms

6.1 Village officials and villagers: Carrot and stick

One mechanism that may influence how village officials govern is through their ability to suppress the occurrence of collective resistance. Officials who are better able to control collective resistance may feel less threatened to deliver high quality services to their community members. An observable implication of this logic is that collective resistance under A_3 where governance outcomes are the worst is most likely to be controlled. To test whether the mechanism is at work, we examine how the village power configuration may influence collective petitions under land expropriation, which serves as the most

¹⁰One concern to this design is that elites may not randomly marry spouses. For example, those who are ambitious could marry for political reasons. Alternatively, the social status of a family may influence both marriage choices and political outcomes. According to China’s Sixth National Population Census conducted in 2010, the average age at marriage for rural population was 23.6. In the CDRS data, the average age was 44.9 for VHs and 45.3 for VPSs. Rural households have been discriminated against throughout the PRC history and have lower social status than their urban counterparts. Those who are ambitious are more likely to migrate to urban areas. It is unlikely that rural people choose to tolerate 20+ year marriage in order to become village officials, who are not even formally included in the state structure.

important trigger of social unrest in rural and peri-urban areas during China’s urbanization. The 2008 household survey asked respondents to report collective petitions that had occurred in their village in each year from 2004 to 2008, regardless of whether they themselves participated in the reported petitions or not. Each petition, if reported, involved respondents to further answer a set of detailed questions, such as the scale and duration of the petition. Following Yu (2007) and Lu and Tao (2017), we define petitions to be collective when there are more than 5 complainants; collective petitions are further categorized into medium-scale (more than 30 complainants) and large-scale petitions (more than 50).

Table 7 reports the results where villages that had a power configuration of A_0 and did not experience land expropriation are treated as the reference group. Under A_0 and A_2 where there is a separation of power between the dual elites, regardless of whether power is shared oligopolistically by two large clans or not, the probability of having collective petitions when land expropriation had occurred is both higher than that of the reference group. This also applies to the monopolized power configuration A_3 . However, as the scale of collective petitions increases (Columns 2 and 3), the probability of having collective petitions when land expropriation had occurred is no longer statistically significant for A_3 , suggesting that collective petitions in villages with the A_3 power configuration were held mostly at the small scale, but not at the medium- or large-scale. One possible explanation is that villagers there are more satisfied with their compensation, which contradicts with our main findings that distribution of land-taking compensation is the worst under A_3 . This leads us to take an alternative explanation, which is that village officials are better able to fragment medium- and large-scale collective petitions under A_3 . This also includes a situation where under A_3 rural households anticipate a smaller chance of success and hence are less likely to participate in collective petitions. In contrast, the coefficients for the interaction term between A_2 and land expropriation are statistically significant across all scales of collective petitions, suggesting that neither power holder is strong enough to block collective resistance. This leads socially embedded village officials to be more accountable to their community members.

[Table 7 is about here]

Collective resistance is costly for villagers to organize and also costly for village officials to fragment and suppress. A possible way for village officials to reduce the cost is to combine “stick” with “carrot” whereby they buy off villagers and make them less likely to pursue the option of collective resistance. The underlying logic is that to discourage land-dispossessed villagers from lodging their complaints collectively, officials need to provide those villagers with additional benefits of some sort, which should cost officials much less than paying land-taking compensation. To test if the carrot mechanism exists, we examine the funds of agricultural subsidies, which, like the funds of land-taking compensation, give village officials discretionary power to distribute, but the amount of subsidies allocated per *mu* of land (1 *mu*=0.16 acre) is significantly less than land-taking compensation. The CRDS dataset used in our study shows that in 2008 rural households on average received agricultural subsidies of 367 *yuan* per *mu*, in comparison with a land-taking compensation of 22,118 *yuan* per *mu*.

Table 8 reports the regression results with respect to agricultural subsidies. Columns 1 and 2 show how the power configuration between the two village leaders influences the distribution of agricultural subsidies. Columns 3 and 4 present the results where we test the carrot mechanism by taking land expropriation into account. The results in Columns

2 and 4 are also visualized in Figure 5 a and b, respectively. Rural households in villages under A_3 received significantly less agricultural subsidies in comparison with the baseline group A_0 , as shown in Figure 5a. While the coefficient for A_2 is not statistically significant, its sign remains positive. The consistent pattern between distribution of agricultural subsidies (Figure 5a) and the distribution of land-taking compensation (Figure 2) suggests the robustness of our main results. In this fully saturated model (Columns 3 and 4), the interactions between the independent variables of our interest and land expropriation allow us to discern the difference in subsidies between households with and without the experience of land expropriation. If village officials were employing the hypothesized carrot approach to buy off villagers with land expropriation, we expect that land-dispossessed households would have received more agricultural subsidies than those without. Figure 5b shows the difference in estimated coefficients between households with and without land expropriation for each type of the village power configuration. The difference is positive and statistically significant for A_3 , suggesting that village officials who are more socially embedded and whose power is monopolized by a clan exercised their discretionary power to allocate more agricultural subsidies to land-dispossessed households.

[Table 8 and Figure 5 are about here]

Clearly, not every land-dispossessed household who received additional agricultural subsidies would be satisfied with the buy-off payments. Chong, Liu and Zhang (2016) find that the heterogeneity of preferences among masses allows the elite to effectively preempt or dissolve collective action by buying off mass members with the lowest expectations of buy-off payments. In our case, additional agricultural subsidies, even in a modest amount, may be sufficient enough to discourage some rural households from joining a collective resistance. The result is that those who are harder to placate may continue their resistance, but the potential for them to develop into large-scale collective resistance has been limited. Our tests, taken together, suggest that socially embedded village officials in a monopolized power structure use a combination of carrot and stick to interact with rural households. Their ability to break down potential medium- and large-scale collective resistance with relatively modest buy-off payments reduces the credibility of collective resistance and leads them to be less accountable to the public.

6.2 Village officials and local governments: Collusion

Preferences of the local government are expected to influence how village officials govern. Mattingly (2019) finds that local governments, by placing clan leaders into positions as village leaders and taking advantage of their social networks, are better able to capture rents and confiscate individual properties. Missing from Mattingly's discussion is why clan elites are willing to join this co-optation and what they could gain from doing so. Understandably, under an authoritarian setting, village officials face a pressure to follow the preferences of their higher authorities. Beyond that, local governments may also offer some reward to incentivize village officials, especially when their demand is against the interest of rural households. In what follows we consider explicitly the potential gains for the co-opted village officials.

We first consider two sources of funds, salary and bonus payments of village officials and intergovernmental transfers to villages, both of which give the township government discretionary power in fund allocation. The township government plays an important role in determining salary and bonus of village officials, including popularly elected village

committee members. Of the 119 sample villages in the 2008 survey, 112 villages, or 94%, had their officials' salary criteria set by the township government. In 66% of villages, the township government contributed more than 50% of the salary payments for VHs and VPSs. The township government also performs periodic cadre evaluations, the outcome of which is linked to individual salary and bonus payments. Over 74% of villages reported that their township government offered individual village officials merit-based material bonuses.

Land expropriation is perhaps the most difficult task for village officials to implement. To test if the hypothesized reward mechanism exists, we first aggregate our dependent variable, individual land-taking compensation ratio, at the village level by taking an average at year $t - 1$ as a way to measure the cost of implementing land expropriation, interact it with our independent variables, and regress the rewards (i.e., salary and bonus payments or intergovernmental transfers at year t) against the interaction terms. A higher land-taking compensation ratio indicates a higher cost of implementing land expropriation. The underlying logic is that if the local government co-opted clan elites as Mattingly suggested, we expect that village officials who better accomplish hard jobs — in this case land expropriation at a lower cost — would be more likely to receive a reward. Because village officials' rewards may be affected by how well they have implemented land expropriation, we measure average land-taking compensation ratio at year $t - 1$, while all other variables are measured at year t . Of course, we do not deny that village officials could be rewarded through other channels, which may involve under-the-table deals that are unobservable. We restrict our sample to include only villages where the power structure remained unchanged between $t - 1$ and t .

Next we consider village officials' perception of getting a promotion using the question, "Is it possible for village officials who perform well to work in the township in the period ____?" The blank was filled in by 1990-2000, 2001-2004 (both periods asked in the 2005 survey), and 2005-2008 (asked in the 2008 survey). We regress perception of getting a promotion against the compensation for land expropriation that occurred during the specified period and its interaction with the independent variables of our interest. This allows us to test how village officials respond to their township government's co-optation strategy. We expect that those who are co-opted are more likely to form a perception that how well they perform land expropriation is linked to their chance of being promoted.

Table 9 reports the regression results, which are also visualized in Figures 6. The results suggest that the co-optation strategy influences how the township government allocates funds, which is a scarce resource, and village officials' perception of promotion. As seen in Figure 6a, the average marginal effect of aggregated household land-taking compensation on salary and bonus payments of village officials is -0.4 for A_3 and it is statistically significant at the 5% level. Specifically, as shown in Figure 6b, as the cost of land expropriation increases, its effect on officials' salary and bonus payments remains positive but decreases; and this effect is no longer statistically significant once the compensation ratio exceeds 1.6. The marginal effect of aggregated household compensation ratio on intergovernmental transfers is positive and statistically significant for A_3 when the compensation ratio is less than 1.2, as shown in Figure 6d. Village officials under A_3 perceive that the probability of being promoted decreases as the cost of land expropriation increases. The average compensation ratio, when less than 0.9, is positively associated with the perception of career advancement, as seen in Figure 6f.

[Table 9 and Figures 6 are about here]

The test results show that under a large clan monopoly A_3 when village officials implement unpopular government policies at a lower cost, they are more likely to be rewarded with higher salary and bonus payments, their villages are allocated more inter-governmental transfers, and they perceive a higher likelihood of career advancement. In contrast, the results do not support a collusion between the local government and village officials under A_2 , because land expropriation outcomes do not influence village officials' salary and bonus payments and intergovernmental transfers (Figure 6 a and c); village officials perceive a higher chance of promotion when they deliver better governance outcomes — in this case, higher compensation to land-dispossessed households (Figure 6 e). Taken together, our findings suggest that the conditions under which the co-optation strategy works are more restrictive than what Mattingly (2019) finds. Specifically, it applies only to villages where village power is monopolized by a large clan, but not to villages where village power is oligopolistically shared by two socially embedded officials.

7 Conclusion

Formal and informal institutions interact, and their interactions have important consequences on how political actors govern locally. This research reconciles the positive and negative aspects of informal institutions in local governance. It identifies that local governance outcomes are jointly determined by the extent to which local political leaders are informally embedded in their community and the extent to which formal political power is distributed in a way to provide room for intra-elite competition and checks and balances. We show that, in the context of rural China, village governance deteriorates when formal political power is monopolized by a large clan, because political actors are able to use informal institutions to fragment collective resistance and buy off aggrieved households, and they are more likely to be co-opted. In contrast, village governance improves when local leaders are more socially embedded and political power is unable to be captured by informal institutions.

One general lesson we can draw from this study is that for many developing countries where social embeddedness of the local governing body is not uncommon, some institutional arrangement that is able to break up the local ruling monopoly is necessary. A democracy is but not the only solution. In authoritarian regimes, an introduction of competition and checks and balances among political actors to local politics, even at the moderate level, may still serve this need. Different from the large literature on competitive authoritarianism,¹¹ our focus is on the interactions of formal and informal institutions at the local community level that make democratic governance viable. The China experience shows that where social embeddedness holds, breaking up the local political monopoly improves village governance. The parallel of village head and village party secretary with each having separate social connections and constituent bases helps align their policy preferences and behavior with the village public, by boosting their responsiveness to local demand for public goods and protecting individual property rights against state expropriation.

The logic of our research sends an alerting message to the latest development of village governance policy and practice in China. The Xi Jinping administration announced a new five-year plan for rural governance entitled “The Strategic Plan for Rural Revitalization (2018-2022)” with a principle of strengthening the communist party’s leadership

¹¹For competitive authoritarianism, see Levitsky and Way (2010).

in the countryside. One way of doing so is to promote the concurrent office holding (*yijiantiao*), whereby the village Party secretary is encouraged to assume the village head by going through village elections ([Office of the Leading Group for Rural Work of the Central Committee of the Chinese Communist Party, 2008](#), Article 25.1). The problem is that when the *yijiantiao* arrangement interacts with village informal clan organizations, it leads to the extreme worst-case scenario of monopolized power structure where the village party secretary, village head, and clan leader are all the same person who is granted extraordinary power with no checks and balances, while the scenario associated with improved governance outcomes (i.e., oligopolistic distribution of political power) is completely eliminated. Understandably, the promotion of *yijiantiao* was intended to facilitate the communist party to co-opt clan elites and allow it to penetrate and control villages; however, deteriorating governance outcomes are expected and will eventually hurt the regime’s legitimacy in the long run.

Finally, the context of village dual-power structure in China provides us with both an opportunity and a limitation. It allows us to test governance outcomes under monopolistic versus oligopolistic power configurations, but limits our ability to examine the outcomes associated with a power configuration where political power is shared by more than two local ruling clans, a scenario arguably associated with more intra-elite competition and checks and balances. The relationship between the number of local ruling clans and local governance could be either monotonically increasing or an inverted U-shape curve.¹² In addition, our study examines how clan identification of local political elites affects their allocation of funds (for land-taking compensation and agricultural subsidies). Ideally, we would like to add to our analysis if the fund allocation disproportionately benefits community members of the political “in group” clan. This requires some information about whether the household head belongs to the same clan group as the village officials, for which our data do not provide. We raise these questions and leave them for future research.

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¹²Our conjecture is different from [Mattingly \(2019\)](#) which suggests a U-shaped relationship (p.101).

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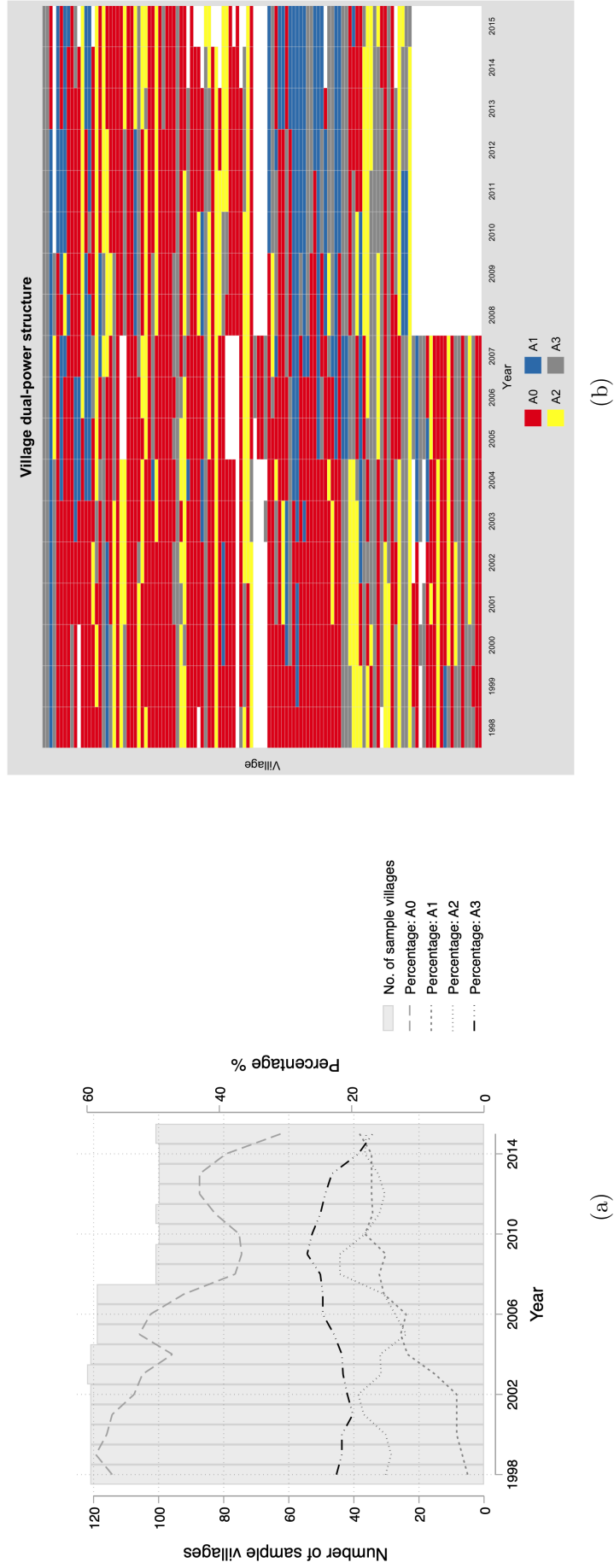
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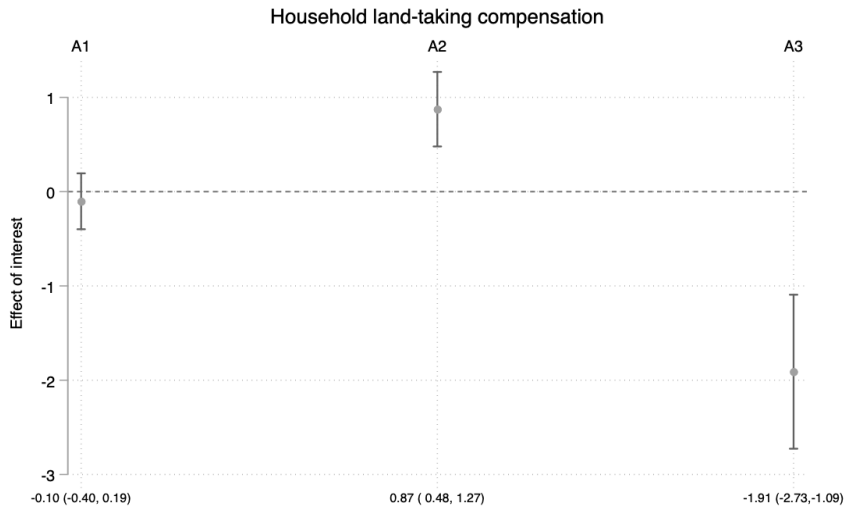
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Figure 1: Power configuration of village dual elites



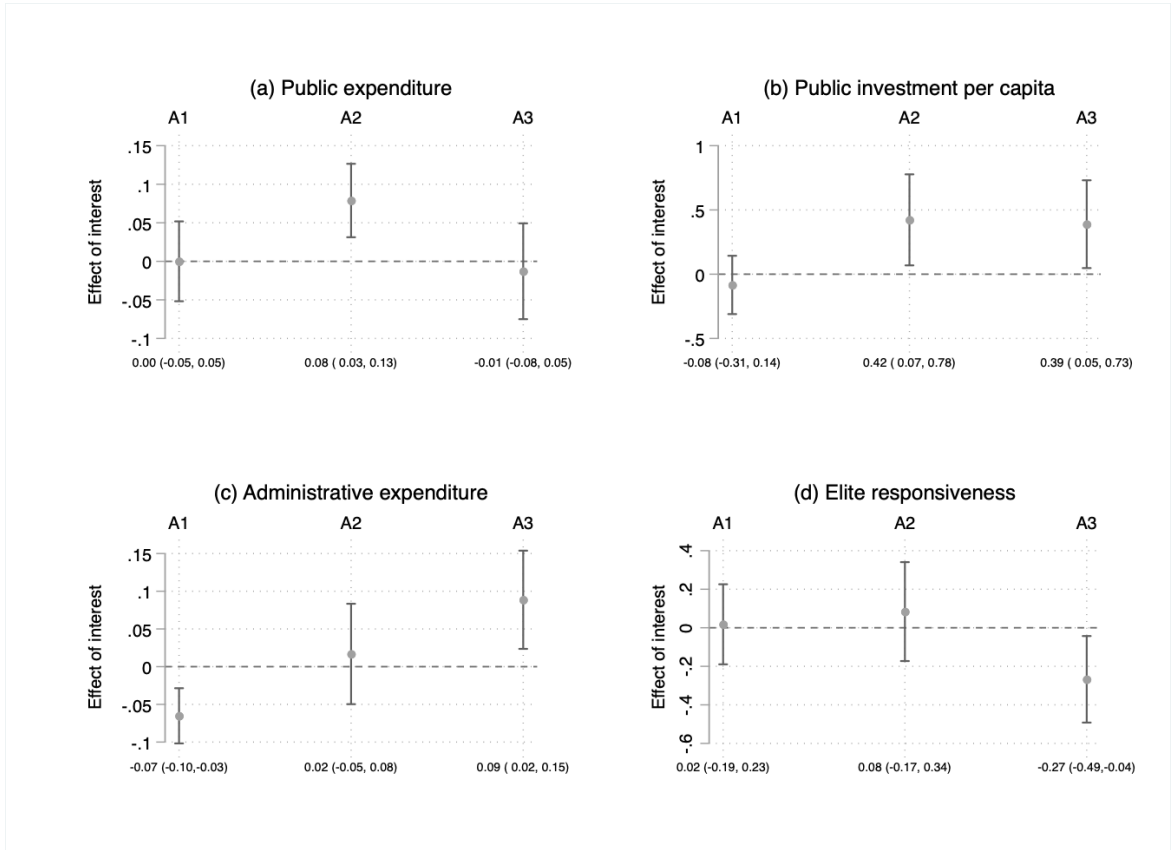
NOTE: Figure 1a shows how each of the four scenarios of village power configuration developed over time. Figure 1b shows changes of village power configuration experienced by each sample village over time.

Figure 2: Village power configuration and land-taking compensation



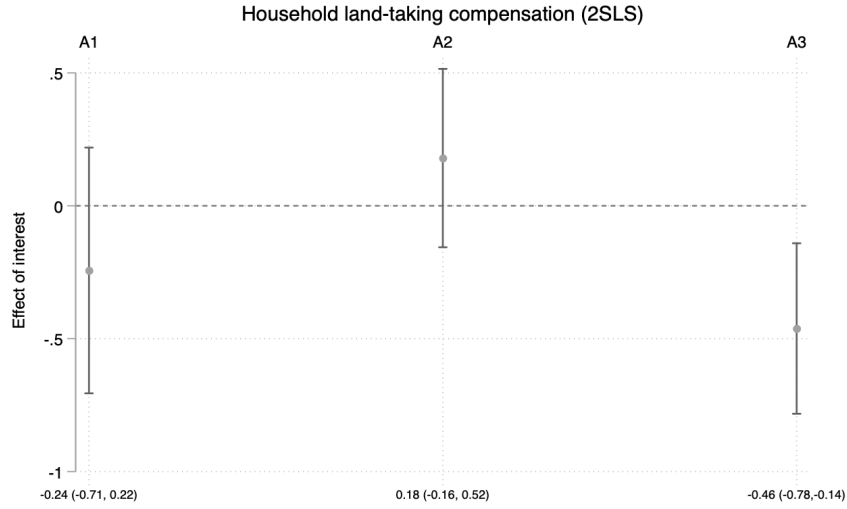
NOTE: This figure shows the effect of village power configuration on household land-taking compensation in comparison to the baseline group with 90% confidence intervals. Scenario A_0 treated as the baseline group.

Figure 3: Village power configuration and public goods provision



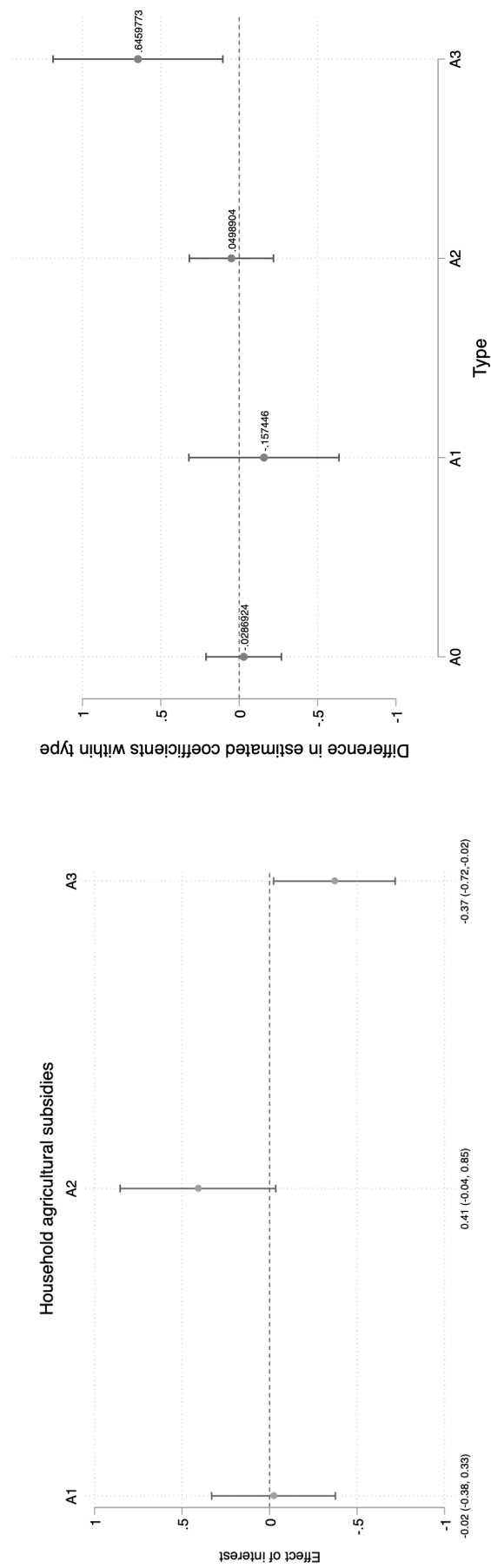
NOTE: The dependent variables are (a) village public expenditure measured as a ratio to total village expenditure, (b) village public investment per capita measured as a monetary value, (c) village administrative expenditure measured as a ratio to total expenditure, and (d) elite responsiveness measured as an indicator of whether the most preferred public project perceived by village households was actually invested by village officials. Each subfigure shows the effect of village power configuration on each dependent variable in comparison to the baseline group with 90% confidence intervals. Scenario A_0 treated as the baseline group.

Figure 4: Village power configuration and land-taking compensation (2SLS)



NOTE: Instrumental variables are constructed based on clan identification of spouses of village officials, including whether the spouse of VH is from a large clan, whether she/he is from the same clan as the VPS, their interaction term, whether the spouse of VPS is from a large clan, whether she/he is from the same clan as the VH, the interaction between these two variables, whether the spouse of VH and the spouse of VPS are both from a large clan, whether they both from the same clan, and the interaction between the last two variables. Scenario A_0 treated as the baseline group. Intervals representing 90% confidence intervals.

Figure 5: Village power configuration and agricultural subsidies

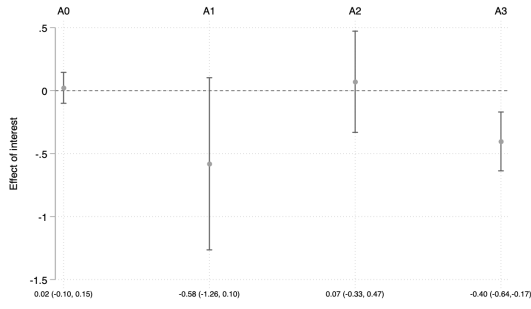


(a) Agricultural subsidies

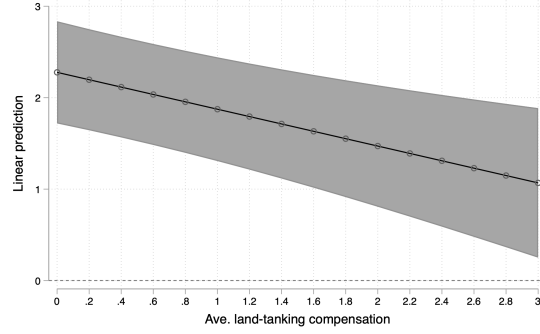
(b) Difference in subsidies

NOTE: Figure 5a shows the effect of village power configuration on the logarithm of agricultural subsidies each village household received in comparison to the baseline group with 90% confidence intervals. Scenario A_0 treated as the baseline group. Figure 5b shows the difference in estimated coefficients between households with and without land expropriation for each type of power configurations.

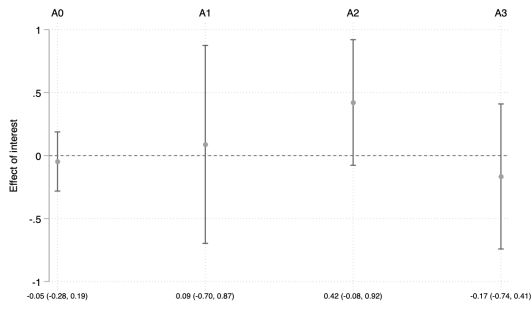
Figure 6: Village elites and local government relations



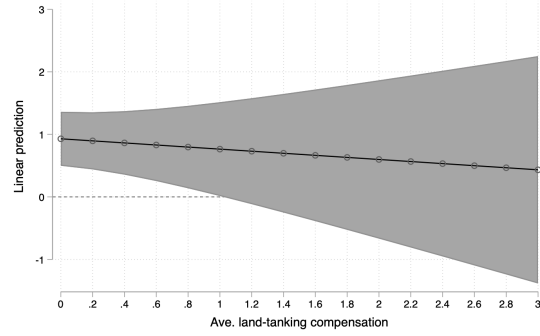
(a) Salary & bonus payments



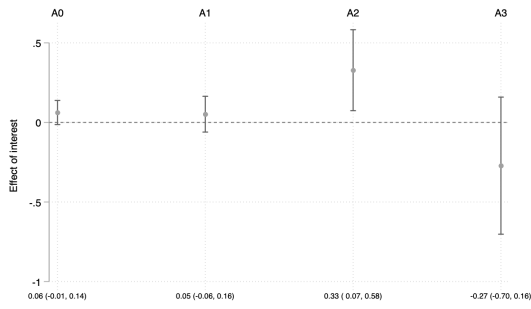
(b) Salary & bonus payments for A_3



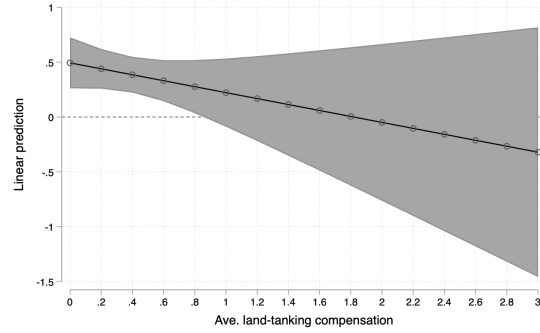
(c) Intergovernmental transfers



(d) Intergovernmental transfers for A_3



(e) Perception of promotion



(f) Perception of promotion for A_3

NOTE: Figure 6(a), (c) and (e) show the effects of aggregated land-taking compensation on salary and bonus payments of village officials, intergovernmental transfers to villages, and village officials' perceptions of promotion, respectively, for each village power configuration scenario with 90% confidence intervals. Figure 6 (b), (d) and (f) show the linear predicted values of each dependent variable under scenario A_3 with 90% confidence intervals.

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Table 1: Village power configuration and expected governance outcome

Scenario	Large clan	Same clan	Social embeddedness	Power balance	Expected governance outcome
A_0	No	No	Low	Oligopoly, more balanced	Baseline
A_1	No	Yes	Low	Monopoly, less balanced	Undetermined
A_2	Yes	No	High	Oligopoly, more balanced	Better
A_3	Yes	Yes	High	Monopoly, less balanced	Worse

Table 2: Summary statistics

Variable	N	Mean/Prop.	Std. Dev.	Min.	Max.
<i>Baseline regressions</i>					
Social embeddedness	1992	0.399	—	—	—
Power balance	1992	0.347	—	—	—
Land-taking compensation	539	0.648	0.887	0	3.586
Public expenditure	449	0.162	0.159	0	0.872
Public invest. per capita (thousand <i>yuan</i>)	299	0.041	0.073	0	0.472
Administrative expenditure	454	0.215	0.177	0	1
Elite Responsiveness	314	0.516	—	—	—
Household size	4908	4.41	1.703	1	15
Communist party membership	4908	0.228	—	—	—
Village cadre	4908	0.137	—	—	—
Household non-agricultural income (log)	4908	7.423	4.328	0	11.988
Education	4875	9.763	2.993	0	23
Income per capita (log)	533	8.090	0.853	5.303	10.235
Fiscal capacity	563	1.649	3.424	0	49.723
Intergovernmental transfer	563	1.043	0.914	0	6.006
Dominant clan	563	0.201	0.401	0	1
Age_VH	2034	44.901	9.442	20	73
Age_VPS	2023	45.286	10.058	22	73
Firm exp_VH	2034	0.25	—	—	—
Firm exp_VPS	2030	0.209	—	—	—
<i>Robustness checks</i>					
Proxy voting	231	0.848	—	—	—
Roving ballot boxes	240	0.504	—	—	—
VHspouse_VPS	940	0.103	—	—	—
VPSspouse_VH	1096	0.102	—	—	—
Large clan_VHspouse	1058	0.27	—	—	—
Large clan_VPSspouse	935	0.295	—	—	—
Large clan_spouses	691	0.185	—	—	—
Same clan_spouses	691	0.37	—	—	—
<i>Mechanisms</i>					
Petition_all	595	0.326	0.469	0	1
Petition_medium	595	0.126	0.332	0	1
Petition_large	595	0.097	0.297	0	1
Agricultural subsidies (log)	4308	5.491	2.163	0	9.909
Salary (log)	238	1.266	0.806	0.077	3.579
Promotion	1257	0.309	—	—	—

Table 3: Village power configuration and household land-taking compensation

	(1)	(2)	(3)	(4)
Social embeddedness	0.580*	0.580*	0.890***	0.874***
	(0.297)	(0.291)	(0.250)	(0.240)
Power balance	-0.229	-0.215	-0.105	-0.102
	(0.280)	(0.285)	(0.172)	(0.180)
Social embed. $\times$ Power balance	-2.522***	-2.339***	-2.900***	-2.682***
	(0.443)	(0.466)	(0.515)	(0.546)
Household-level controls		✓		✓
Village-level controls			✓	✓
Village fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓
City-year fixed effects	✓	✓	✓	✓
N	429	429	429	429
R^2	0.553	0.556	0.567	0.570

Note: Robust standard errors clustered at the village level in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Full results available in Appendix Table A2.

Table 4: Village power configuration and public goods provision

	Public expenditure		Public invest. per capita		Admin. expenditure		Elite responsiveness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Social embeddedness	0.0649** (0.0314)	0.0789*** (0.0290)	0.286 (0.201)	0.423* (0.215)	0.0396 (0.0405)	0.0169 (0.0405)	-0.0185 (0.137)	0.0839 (0.156)
Power balance	-0.00307 (0.0286)	0.00004 (0.0315)	-0.0344 (0.164)	-0.0838 (0.138)	-0.0530** (0.0223)	-0.0652*** (0.0222)	-0.00818 (0.119)	0.0180 (0.126)
Social embed. $\times$ Power balance	-0.0844** (0.0365)	-0.0917** (0.0378)	0.0709 (0.224)	0.0499 (0.217)	0.126*** (0.0410)	0.137*** (0.0386)	-0.317* (0.174)	-0.369** (0.179)
Village-level controls		✓		✓		✓		✓
Village fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Province-year fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
N	439	398	256	256	444	403	288	288
R^2	0.484	0.498	0.462	0.499	0.524	0.542	0.418	0.457

Note: Robust standard errors clustered at the village level in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Full results available in Appendix Table A3.

Table 5: Village elites, quality of democracy, and governance

	Public goods provision				
	land-taking compensation (1)	Public expenditure (2)	Public invest. per capita (3)	Admin. expenditure (4)	Elite responsiveness (5)
Social embeddedness	0.842*** (0.160)	0.0850*** (0.0316)	0.358 (0.222)	-0.0146 (0.0372)	0.0464 (0.154)
Power balance	-0.271 (0.165)	-0.00321 (0.0311)	-0.160 (0.170)	-0.0700*** (0.0229)	0.00670 (0.131)
Social embed. × Power balance	-2.309*** (0.761)	-0.0922** (0.0389)	0.144 (0.238)	0.140*** (0.0404)	-0.334* (0.184)
Proxy voting (1=yes)	-0.376* (0.191)	-0.00305 (0.0390)	0.0817 (0.179)	0.00670 (0.0328)	-0.143 (0.139)
Roving ballot boxes (1=yes)	-0.807*** (0.230)	0.0377 (0.0277)	-0.226 (0.212)	0.0116 (0.0273)	-0.00530 (0.110)
Household-level controls	✓				
Village-level controls	✓	✓	✓	✓	✓
Village fixed effects	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓
City-year fixed effects	✓				
Province-year fixed effects		✓	✓	✓	✓
N	423	375	238	380	268
R ²	0.540	0.522	0.517	0.583	0.458

Note: Robust standard errors clustered at the village level in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Full results available in Appendix Table A4.

Table 6: 2SLS results on land-taking compensation

	FE (1)	2SLS (2)
Social embeddedness	-0.0266 (0.232)	0.180 (0.204)
Power balance	0.0369 (0.196)	-0.243 (0.281)
Social embed. $\times$ Power balance	-0.469 (0.294)	-0.398 (0.313)
Weak identification test (Wald F statistic)		15.756
Over identification test (p -value)		0.225
Household-level controls	✓	✓
Village-level controls	✓	✓
Year fixed effects	✓	✓
City-year fixed effects	✓	✓
N	459	252
R^2	0.522	0.085

Note: Robust standard errors clustered at the village level in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Full results available in Appendix Table A5.

Table 7: Village power configuration and collective petition

	Petition_all size>5	Petition_medium size>30	Petition_large size>50
	(1)	(2)	(3)
A0 × No land expropriation	Reference group		
A0 × Land expropriation	0.169** (0.0735)	0.135** (0.0566)	0.132** (0.0563)
A1 × No land expropriation	0.132* (0.0674)	0.0181 (0.0686)	0.0682 (0.0465)
A1 × Land expropriation	0.110 (0.158)	0.0507 (0.0568)	0.0579 (0.0534)
A2 × No land expropriation	0.0322 (0.0801)	0.106 (0.0713)	0.0983 (0.0663)
A2 × Land expropriation	0.250** (0.111)	0.153** (0.0721)	0.118* (0.0638)
A3 × No land expropriation	0.171** (0.0830)	0.0550 (0.0773)	0.0233 (0.0630)
A3 × Land expropriation	0.276** (0.117)	0.0744 (0.0963)	0.0198 (0.107)
Village-level controls	✓	✓	✓
Year fixed effects	✓	✓	✓
Province-year fixed effects	✓	✓	✓
N	547	547	547
R^2	0.570	0.547	0.548

Note: Robust standard errors clustered at the village level in parentheses.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Full results available in Appendix Table A7.

Table 8: Village power configuration and agricultural subsidies

	(1)	(2)	(3)	(4)
Social embeddedness	0.526** (0.264)	0.409 (0.270)	0.505* (0.264)	0.391 (0.272)
Power balance	0.104 (0.166)	-0.0226 (0.215)	0.115 (0.167)	-0.0130 (0.217)
Social embed. $\times$ Power balance	-0.720** (0.294)	-0.757** (0.317)	-0.743** (0.296)	-0.772** (0.318)
Land expropriation			-0.0399 (0.142)	-0.0287 (0.146)
Social embed. $\times$ Land expropriation			0.110 (0.224)	0.0786 (0.225)
Power balance $\times$ Land expropriation			-0.269 (0.304)	-0.129 (0.328)
Social embed. $\times$ Power balance $\times$ Land expropriation			0.863* (0.507)	0.725 (0.514)
Household-level controls		✓		✓
Village-level controls		✓		✓
Village fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓
City-year fixed effects	✓	✓	✓	✓
N	4,296	4,240	4,296	4,240
R^2	0.375	0.375	0.376	0.377

Note: Robust standard errors clustered at the village level in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Full results available in Appendix Table A8.

Table 9: Village elites and local government relations

	Salary & bonus payments (1)	intergovernmental transfers (2)	perceptions of promotion (3)
Social embeddedness	0.132 (0.407)	-0.274 (0.199)	-0.119 (0.0859)
Power balance	0.207 (0.612)	-1.094 (0.709)	-0.129 (0.129)
Social embed. $\times$ Power balance	0.835 (0.973)	0.939 (0.831)	0.392 (0.237)
Ave. compensation ratio	0.0228 (0.0747)	-0.046 (0.143)	0.0624 (0.0460)
Social embed. $\times$ Ave. compensation ratio	0.0481 (0.241)	0.469 (0.377)	0.266 (0.171)
Power balance $\times$ Ave. compensation ratio	-0.604 (0.401)	0.135 (0.484)	-0.0105 (0.0888)
Social embed. $\times$ Power balance $\times$ Ave. compensation ratio	0.130 (0.504)	-0.723 (0.567)	-0.589 (0.407)
Village-level controls	✓	✓	✓
Village fixed effects	✓	✓	✓
Year fixed effects	✓	✓	✓
Province-year fixed effects	✓	✓	✓
N	131	155	100
R^2	0.922	0.892	0.974

Note: Robust standard errors clustered at the village level in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Full results available in Appendix Table A9.