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Village Elections, Government Accountability, And Policy Provisions in Rural China

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Political Science

by

Leihua Ye

Committee Members:

Prof. Kathleen Bruhn, Chair

Prof. M. Kent Jennings

Prof. Eric R.A.N. Smith

Prof. Cynthia S. Kaplan

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The dissertation of Leihua Ye is approved

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M. Kent Jennings

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Eric R.A.N. Smith

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Cynthia S. Kaplan

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Kathleen Bruhn, Committee Chair

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Acknowledgements

I am extremely lucky to be enrolled in a top graduate program in the states and mentored by dedicated faculty members. While looking back, I did not understand anything about causal inference in my first year at grad school. Now, I'm writing a book-length dissertation using various causal inference methods. It would not be possible without my committee members' guidance and support. Special thanks to Prof. Bruhn, Prof. Jennings, Prof. Kaplan, and Prof. Smith.

Chinese philosopher Mencius (*Mengzi*) once said: "To a state, the people are the most important thing. The state comes second. The ruler is the least important." For a long time in Chinese history, the relationship is reversed as the ruler is considered the most important and the people the expendable. The empirical findings presented in this dissertation resonate with Mencius's ideology: if ordinary villagers act collectively, they can hold the men in power accountable. So, I want to dedicate this dissertation to the prospectus of political institutionalization and the rule of law in China.

My parents have always been role models in my life. Their work ethic and commitment to family inspire me to thrive, work hard, and persevere. It is a privilege to have such a supportive and caring family.

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Chapter 1

Village Elections and Government Accountability in China

1. Introduction

As Dahl (1973, p.1) puts it, "a key characteristic of a democracy is the continuing responsiveness of the government to the preferences of its citizens, considered as political equals." In essence, politics hovers around power, but the problem is that the power distribution is hardly symmetric. In most cases, the government has the upper hand vis-à-vis the public in terms of information acquisition, familiarity with parliamentary procedures, and other requisite resources. Without a set of political institutions and formal rules in place, the government may exploit the unbalanced power distribution for personal gains instead of advancing the constituents' interests.

In democracies, free competitive elections offer a cost-effective solution that mobilizes mass participation to handpick the most capable candidates for office and hold them accountable while in office. If living up to the expectations, the incumbent may be rewarded with another term; otherwise, the opposition comes into power (Barro, 1973). The repetitive iterations of the electoral process hold the government accountable in democracies.

Since the 1980s, China also has rolled out direct authoritarian-style elections in its large swath of rural areas, aiming to capture the informational utility of popular feedback on the quality of local governance and official malfeasance (Oi, 1996; O'Brien and Li, 1999).[1]

[1] Here, this dissertation does not claim that the Chinese village elections are comparable in any way as their western counterparts. These elections are flawed in many ways (e.g., corruption, bribery) but provide practical solutions to a number of local governance issues.

Traditionally, the only viable channel of holding local officials accountable is through top-down supervision: the central government passes down policy guidance to the lower rungs of the bureaucracy. However, the supervisory model is inefficient and is often less responsive to political corruption. As a result, the central government decided to implement direct elections to improve local governance. A handful of villages were selected as an experiment to implement direct elections in the early 1980s, and all village chiefs (VCs) and council members are legally bound to be publicly elected in 1998, after passing the Organizational Law of Village Committees (OLVC).

According to the policy input-output framework, political procedures (e.g., elections) collect citizens' preferences at the input end that affects the policy provisions at the output end (Easton, 1953). If it works out properly, direct elections should have tilted the power balance between the local government and the villagers immediately after the introduction. Holding elections regularly for the past three decades should have reshuffled the traditional social structure within the villages. Regrettably, the existing literature has not picked up this line of argument and fails to consider the time dimension.

To be specific, my dissertation aims to answer the following questions: has the formal channel of participation via village elections made VCs more accountable? How do elections evolve over time in an authoritarian regime? Finally, as a formal avenue, how do elections interact with the traditional informal avenues (e.g., social group, clanship) in checking VCs' behaviors?

This dissertation argues that village elections bring in government accountability right after the first election for the same reason why it works in other democracies. As time goes by, villagers become increasingly familiarized with the voting procedure. As a result, they should

show higher levels of enthusiasm and trust in village governance, shifting the power dynamics away from traditional avenues (such as informal kinship structures) to formal ones. The past literature has attempted to answer some of the questions but not without mixed results. I adopt a causal inferential design to clarify the confusion after pointing out the underlying reasons leading to the mixed results.

This introductory chapter proceeds as follows: I first define government accountability by dissecting it into various parts. In an authoritarian regime, some restraints and limitations prevent us from measuring the concept in a fully satisfactory way. Instead, I propose practical measurements of village accountability with reference to the existing scholarship. While laying out research questions and hypotheses, I pay special attention to the existing literature and academic gap, which will be more thoroughly examined in the subsequent chapters. The chapter concludes with the overall organization of the dissertation and project originality and significance.

2. Definition and Measurement of Government Accountability

To say one person (A) is accountable to another person (B), two preconditions need to be in place: A is bound to act on B's behalf, and B has some sort of formal institutional or informal ways of rewarding good performers and punishing corrupt ones (Fearon, 1999). In a more elaborated manner, Schedler argues for a multi-faceted understanding of government accountability as a three-layer concept: subjecting the use of power to the threat of potential sanctions, exercising power in a transparent way, and allowing officeholders to justify the acts (Schedler, 1999). The first layer illustrates the negative consequences if the agent fails to deliver, which refers to enforcement. The second and third layers require the agent to provide information on its intention and behavior, which relates to answerability. Finally, the second

dimension requires the agent to inform citizens properly and answer any difficult questions (Schedler, 1999).

These two dimensions of accountability serve different goals: answerability provides informational utility to justify procedural choices, and enforcement offers an overall assessment of the agent's performance in information sharing and policy delivery. Within a cursory analytical framework, answerability is inclusive of enforcement. Hypothetically, if failing to inform the principal properly, the agent may face sanctions and incur higher transaction costs when it comes to the enforcement stage.

More importantly, it comes as a measurement challenge to gauge how well the government has informed its citizens in an authoritarian regime, which often manipulates information flow and intimidate citizens. Salient political fear makes opinion-based surveys in authoritarian regimes less reliable. To play safe, citizens hide their genuine opinions and give politically desirable answers by taking leaders' positions on the key issues and mimicking their behaviors. A significant congruence between public opinion and policy outcomes could be fabricated out of political fear and political manipulation, which does not reflect the level of accountability in an authoritarian regime like China's. This is the main reason why the past research on government accountability in China leaves out the opinion-based evidence and relies on the enforcement dimension (e.g., policy delivery) (Tsai, 2007). For example, Kennedy et al. (2004) look at the actual policy outcome on the land management issue to examine the accountability effect of election. Following this line of inquiry, I mainly measure the level of accountability as the government's performance in policy delivery. To operationalize it, I treat the provisions of favorable policies and the lenient implementations of unfavorable ones as accountable

behaviors and the lack of favorable policy provisions and the strict implementations of unfavorable ones as unaccountable behaviors.

3. Does Mass Participation Affect Government Accountability in An Authoritarian Regime?

China scholars have not reached a consensus on the effectiveness of public participation in a highly centralized society. On the one hand, some optimistic researchers argue that mass participation, including these village elections, has addressed the principal-agent problem and led to more government accountability. At a higher level, voters can overcome coordination problems and elect "good types" of candidates in subnational congress elections (Manion, 2017). At the lower level, even poorly conducted elections provide enough electoral incentives for corruptible village leaders to act accountably (Brandt and Turner, 2007), reallocate land management fairly (Kennedy et al. 2004), agree with the villagers on the role of the state's involvement in the economy (Manion, 1994), and be more responsive to villager complaints out of fear of electoral punishment (Tsai, 2002). At the policy outcome end, direct elections have increased public goods investment (Luo et al., 2007; Martinez-Bravo et al., 2014) and increased accountability while decreasing the state's grip of fiscal power (Wang and Yao, 2007).

On the other hand, many scholars argue that holding elections at the village level has not addressed the asymmetrical power distribution, let alone overhaul the regime's authoritarian rule for several reasons. For example, other influencers, such as the township and higher authorities and the traditional social force within the villages, weigh heavily in local governance (Guo and Bernstein, 2004; O'Brien and Han, 2009). The township authority supervises local affairs closely while leaving a small window of opportunity for self-

governance. The village party secretary, who plays a more significant role in local issues than VCs, is still appointed by the higher government (Oi and Rozelle, 2000).

There are mainly three reasons for the mixed results. First, the existing scholarship runs statistical analysis on a small non-representative sample using observational designs, which limit internal validity and the scope of generalizability. The observational approaches by design contain a low level of causal inferential power, and the non-representative sample fails to consider regional heterogeneities.

Second, the scholarship does not distinguish preferable policies from less preferable ones while discussing the policy effect of holding elections. Presumably, these two types of public policies should affect people's lives differently.

Third, the time dimension probably explains the largest share of the confusion. Political institutions evolve as contextual environments change and express time-dynamic treatment effects over time. This is a particularly salient issue in the Chinese case due to the evolving interactions between a newly introduced democratic institution and its surrounding authoritarian settings. My research makes original contributions in this regard.

China's Family Planning Policy (FPP)

Until the 1970s, the Chinese government believed in a larger population and encouraged families to have more children. In 1976, the population size skyrockets to 940 million. In the post-Mao era, the Chinese government realized its weak economy could not support the ever-expanding population and decided to cap the fertility rate to ensure economic growth. In 1979, the state encouraged couples to have only one child in principle and announced the FPP more formally in the next year.

In an era when more children mean more labor force, the strict population policy is widely unpopular and faces resistance, especially when the firstborn is a girl (Greenhalgh, 1994; Greenhalgh and Li, 1995; White, 1990). In anticipation of the harsh pushback, the state allows some degree of policy leniency in the rural areas and proposes exemptions for a second child. Besides, the central government issues policy guidance to relax policy enforcement and asks for patience from local officials. The policy tone has been through several stages of policy relaxation and tightening up, which can be roughly divided into the following steps.

Stage 1 (1979 – 1980): the official rhetoric provided soft guidance as: "one is best, at most two, never a third" (Short and Zhai, 1988). The statement laid out what the state prefers but comes with no strict enforcement mechanism or penalties attached.

Stage 2 (1981 – 1983): the state decided to tighten up after the initial rollout. It strictly forbade second births, except under extreme circumstances. The state stipulated penalties and coercive measures for policy violators, and VCs were tasked to assist the township authority to implement the policy.

Stage 3 (1984 – 1987): the state relaxed the FPP in 1984 after the release of Central Document 7, which granted exceptions for second children (Greenhalgh, 1986). Document 7 repudiated the use of coercion witnessed in the early years and preached for patient approaches like persuasion and education (White, 1990). Also, local officials were allowed for more control over when and how to ease policy pressure to suit local needs.

Stage 4 (1988 to later): strict implementation of the FPP. Resolute state control with no leeway left for local officials (Greenhalgh and Li, 1995).

At least in the first three stages, local bureaucracies have permission to adjust the policy strength, if needed (Short and Zhai, 1998). The decentralization model results in significant

variations of the implementation in terms of when and how the policy is carried out, which explains why there is no single one-child policy (Short and Zhai, 1998).

VCs are stuck in the middle ground of two conflicting parties. On the one hand, local leaders face incentives to carry out the policy strictly at the request of the higher authorities. On the other hand, VCs are members of a community and share family lineage and culture with fellow villagers (Shue, 1988). They have moral obligations and social responsibilities to protect the kin and clan members. Understandably, any strict policy enforcements may invite social sanctions from the disgruntled villagers in election seasons. Therefore, it makes intuitive sense that VCs face extra electoral incentives to grant policy relaxations (e.g., the second-child exemptions).

Hypothesis 3.1*: The introduction of elections makes local leaders accountable to locals by providing better policy provisions.*

Chapter 3 aims to test this hypothesis and look at the immediate effect of village elections.

4. Institutional Learning in A Comparative Perspective

Political institutions are a set of rules and procedures that condition and constrain human behaviors (Levitsky and Murillo, 2009). To achieve the intended goals, individuals need to coordinate with other community members and societal actors at a larger scale to create social norms and establish a common understanding of what appropriate behaviors would be. Before such a common understanding is achieved, social members may respond to the institutions differently as if there were consensuses. However, it takes time and requires preconditions for new institutions to take root and become established socially, a particular challenge that prevents developing countries from developing institutionalism (Huntington, 1968).

As mentioned above, there is an insufficient supply of work that incorporates time into their analytical framework, and I have to borrow from other fields to illustrate how time affects institutional performance. In addition to the passage of time, institutions require a stable political system to work as expected. For example, plurality and majoritarian electoral systems fail to constrain the number of political parties in weakly institutionalized systems (Cox, 1997; Moser, 1999; Sartori, 1986, p.62). Besides, formal electoral punishment does not work as expected in a less institutionalized environment than fully established societies; instead, non-electoral participation works better in making government responsive (Cleary, 2007). No wonder new political institutions need to work through informal social networks in these weakly institutionalized environments (Grossman, 2014). The same idea applies to the Chinese case that recently rolled out a new institution, and it is reasonable to assume the institution evolves.

As can be seen, stable macro-political settings affect how political institutions perform, and any change with either factor leads to different institutional expressions. With a focus on the Chinese case, villagers may be skeptical of the utilities of elections at first but become more engaged after several rounds of direct involvement. Furthermore, selecting leaders directly leaves psychological impacts on citizens' beliefs and expectations of what good governance looks like, which shapes their behaviors in return. Li (2003) finds that Chinese villagers have a higher level of political efficacy after electoral participation. Similarly, Manion concurs electoral contestation increases voter participation and promotes the idea that leaders are trustworthy (Manion, 2006).

There is a learning curve for villagers to be familiar with the electoral components, which leads to the assumption that electoral competitiveness should exert different effects as time

goes by. In theory, the level of competitiveness positively relates to the policy outcomes as the electoral competitiveness attracts a more significant number of voters than the non-competitive ones. Besides, villagers are more likely to find the best candidate if provided with multiple choices, and whoever won the election faces more incentives to perform well, creating a positive policy feedback loop.

However, this may not be the case when the election first rolled out, as villagers still may find the electoral process strange. They become more capable of distinguishing the competitive from the non-competitive ones after several rounds of elections. After constructing various multivariate regression models of each period and examining how the variable coefficients change over time, I do not arbitrarily set up a cutoff point of how many rounds of elections are needed but rather let the data speak for itself.

The second hypothesis puts electoral competitiveness into perspective and examines its effects before and after passing the initial stage of development.

Hypothesis 4.2*: Election competitiveness leads to better policy provisions only after passing the initial stage of implementation.*

I choose the amount of public investment as the dependent variable and test these hypotheses in Chapter 4.

5. The Interactions Between the Formal and Informal Avenues

The existing literature agrees that the informal network plays a crucial role in Chinese rural societies. Before the establishment of the formal election, villagers turn to informal social networks, including social lineage groups (Manion, 2006; Tsai, 2007; Xu and Yao, 2015), culture and norms (Lu and Shi, 2015), and Confucian ideology (Bell, 2010; Shi and Lv, 2010), for accountable behaviors.

These informal channels play a critical role in maintaining societal coherency and keeping village leaders accountable (Tsai, 2007). Local leaders need the consent of the traditional village authorities to collect taxes and implement other public policies (Li, 2003; Li and O'Brien, 1999; O'Brien, 1994; O'Brien and Shi, 1999; Tsai, 2007a, 2007b; Wang, 1997). For example, Xu and Yao (2015) find that VCs can overcome collective action problems and secure compliance with the provisions of public goods if they are connected with the two largest surname groups within the village.

The relationship between the informal and formal channels of accountability is dynamic and fluid by nature, and the balance tilts over to the informal end at the beginning. It may tilt over to the formal avenue after several rounds of implementation. With a time dimension in mind, the third hypothesis examines the interactions between the formal and informal channels in a timespan of over 20 years.

Hypothesis 5.3*: In the weakly institutionalized environment, informal avenues weigh more influence in delivering government accountability before elections become institutionalized, and formal accountability takes over after becoming institutionalized.*

I choose the amount of self-funded public projects and test hypothesis 5.3 in Chapter 5, which contains more information on variable constructions and model selections.

6. Project Significance and Originality

Upon its completion, the project makes original contributions in three significant ways. First, this is amongst the most pioneering empirical studies examining the effects of elections in an authoritarian regime with a longitudinal design. Currently, the existing scholarship has not picked up this line of intellectual inquiry. The authors of the dataset that I'm using have produced a series of working papers, mostly on the impacts of elections on economic life. For

example, Martinez-Bravo et al. (2012; 2014) find that elections led to income redistribution within villages, primarily caused by increased incentives for local leaders.

Furthermore, village officials are better controlled by direct elections than the top-down supervision. In another piece with a typology between public preference and upper authority preferences, Martinez-Bravo et al. (2011) find holding elections shift the direction closer to the constituents. Xu and Yao (2015) conclude that these informal rules indeed increased the provisions of public investment considerably, and the association appears to be stronger when the clans are more cohesive.

These studies fail to consider the fact that institutions may perform differently along the process of institutionalization. So, the second contribution of my research is to fill up the gap and examine how democratic institutions (elections) evolve in an authoritarian regime over time. It is the first academic endeavor of incorporating the time dimension in disaggregating the institutional learning and institutionalization processes into multiple stages, with an intellectual inquiry of such kind still lacking in the field.

Third, elections have provided an additional avenue of public participation and shaped people's beliefs and expectations of good governance in the long run. So, the longitudinal scope of this project sheds light on the long-term political development in China.

7. Organization of the Dissertation

Chapter 2 introduces the research design along with variable constructions and methods. Chapter 3 attempts to quantify the immediate effect of holding elections right after the introduction by testing hypothesis 3.1. Then, it tests hypotheses 2 and 3 in Chapters 4 and 5, respectively, for the long-term effects of village elections. With an extended temporal scope in

mind, these two chapters check the impact of electoral competitiveness and electoral maturity in the longer term.

Chapter 2

Methodology

1. Introduction

China adopts a decentralized model and delegates policy enforcement to local officials who are stuck in the middle of the upper authority and local villagers. The conflicting nature of these two powers puts local leaders in a tricky position. On the one hand, they need to do their due diligence to meet the political quota set by the upper authority. On the other hand, they have personal interests at stake and face societal sanctions for implementing unpopular policies strictly. It is a tug of war between the top-down and bottom-up channels that shape the direction and the extent to which VCs carry out social policies.

Table 2.1: Policy Choices and Government Accountability

		VCs' Behaviors	
		Accountable	**Not Accountable**
Types of Public Policy	**Preferable**	1. Early adoption 2. Increase the frequency of adoption	1. Late adoption 2. Decrease the frequency of adoption
	Not Preferable	1. Delay the adoption 2. Allow policy relaxations 3. Less frequent adoptions	1. No delay 2. No policy relaxation 3. More frequent adoptions

Local leaders should push for preferable policies in villages with direct elections and hold back less preferable policies. Preferrable policies are defined as the ones that would benefit the villagers after their implementation. In contrast, they are more likely to shirk away from their

obligations if the electoral mechanism is missing. Table 2.1 describes the typology between policy type and VCs' behaviors.

This chapter walks through different components of the research design and proceeds as follows. First, it begins with the data source and pays special attention to the data collection process, which is crucial for the choices of subsequent research designs. Second, it describes the testable hypotheses and justifies the specific choices of quantitative methods. Third, it introduces dependent and independent variables along with the variable measurements and operationalization for each chapter. In the end, this chapter concludes with a summary.

2. **Data Source**

There are potentially two longitudinal datasets that can help answer our research questions. The first is the National Fixed-Point Survey (NFS), an annual economic survey administered by the Chinese Ministry of Agriculture. The dataset collects nationally representative samples since its beginning year in 1987. It adopts a stratified random sampling strategy: select counties within a province with the number of counties proportional to the rural population of the selected province, and then randomly pick villages within the county. Villages cannot self-select into the treatment group or have any significant influence over having preferential considerations. Instead, the decision comes from the higher authorities (e.g., township, provincial) with no direct input from the local level.

The NFS has collected data from roughly 300 villages from 1980 to 2005 except in 1992 and 1994 for administrative reasons. To compute these two missing years, researchers take the average mean of the two adjacent years: take the average of 1991 and 1993 to calculate 1992 and the average of 1993 and 1995 for 1994. A replacement with similar social-economic characteristics would be added for any dropout village.

The second source is a retrospective dataset of the NFS called the Village Democracy Survey (VDS), which is administered by Monica Martinez-Bravo, Gerard Padró I Miquel, Nancy Qian, and Yang Yao.[2] In two rounds (2006 and 2011, respectively), the researchers collect additional social and economic characteristics of the same villages covered by the NFS, including the history of electoral reforms, public goods expenditures, village clan structure, the presence of traditional organizations, and characteristics of elected village leaders (Miquel et al. 2012). In total, the VDS obtains 217 villages. After robustness checks, these two datasets prove to be quite similar in a broad array of metrics (Martinez-Bravo et al., 2011). The VDS authors have generated several impactful works based on these two datasets, including American Political Science Review articles and several NBER working papers. This dissertation only has access to the VDS dataset.

3. Identification Strategy and Variables

My dissertation attempts to quantify the immediate and long-term effects of Chinese village elections and contains three sets of hypotheses. This section introduces the causal identification strategy for the proposed hypotheses.

Hypothesis 3.1*: The introduction of elections makes local leaders accountable to locals by providing better policy provisions (immediate effect).*

Hypothesis 4.2*: Election competitiveness leads to better policy provisions only after passing the initial stage of implementation (long-term effect).*

Hypothesis 5.3*: In the weakly institutionalized settings, election interacts with traditional force differently over time (long-term effect).*

[2] I obtain the dataset through personal communication.

Hypothesis 5.3.1*: Social institution weighs more heavily in the early trial period.*

Hypothesis 5.3.*2: Formal institution weighs more heavily in the formal adoption period.*

Causal Identification Strategy

This dissertation adopts a difference-in-differences (DID) design and a panel design. The quantitative analysis provides empirical insights into the policy impact of elections, both in the short and long run. The presence of an electoral process should make VCs shift policy implementations in a way preferable for villagers.

To test *hypothesis 3.1*, Chapter 3 adopts the DID design to examine the immediate effect of introducing elections by comparing the policy differences before and after the introduction. The DID design is desirable because there is a clear temporary cutoff point.

To test *hypotheses 2* and *3*, Chapters 4 and 5 adopt a panel design with two-way fixed effects (FE) at the year and village levels. The FE model controls for observed and unobserved confounding variables.

Dependent Variables

This dissertation develops three sets of dependent variables (DVs) to measure the concept of government accountability, contingent upon data availability and theoretical reasoning in subsequent chapters. It assesses the concept from social and economic dimensions. To test for the social implications, I treat the Family Planning Policy (FPP) as the social construction of the electoral effect. In rural China, the FPP has been a controversial, if not the most, issue for the past three decades. However, the FPP is a private good that interests a sub-group of people more than the entire population, regardless of its policy significance.

To address this concern, chapters 4 and 5 create two economic variables that equally benefit the entire village population. The inclusion is a desirable addition because these policies should

be considered a collective good that equally interests the majority of Chinese peasants. Moreover, the combination of social and economic constructions provides a holistic view of how public participation through electoral reform affects collective life in different ways.

Independent Variables

This section describes the constructions of independent variables (IVs), measurements, and operationalization. There are three sets of IVs: the introduction of electoral reform, election competitiveness, and the level of political institutionalization.

Chapter 3 tests the immediate effect of local elections right after its introduction (*hypothesis 3.1*). In this case, the IV is the electoral reform and will be operationalized as a dichotomy variable of whether village i has reformed its electoral procedure from 1982 to 1984.

Chapter 4 tests *hypothesis 4.2* and compares how electoral competitiveness exerts different effects as the process becomes institutionalized. The IV is the extent of electoral competitiveness. To measure electoral competitiveness, I construct a composite index based on two sets of factors: the quality of candidates and the quality of public participation.

From the perspective of candidates, competitive elections should have multiple running candidates nominated within the village, selected either by village representatives or villagers directly. In contrast, elections with only one candidate, or those whose candidates are appointed by the township government, pay lip service to the electoral reform.

From the perspective of mass participation, competitive elections foster public trust and enthusiasm that translate into a high voter turnout and a small margin between the two leading contestants. Often, a landslide victory indicates a lack of genuine competition. Therefore, I will adopt the same criteria for deciding the election quality.

Chapter 5 looks at the level of electoral institutionalization and how it interacts with traditional social forces in providing policy outcomes. To test *hypothesis 5.3*, the IV is the level of institutional strength. It is operationalized as the number of signature rights that an elected VC has vis-à-vis a party secretary in a village.

Variable Operationalization

Hypothesis 3.1

To test *hypothesis 3.1*, I choose the implementation of the FPP as the DV and the introduction of election as the IV. To operationalize the DV, I treat the policy relaxations as a signal of VCs catering to villagers' interests and being accountable. Presumably, VCs with electoral incentives are more likely to shift to villagers' interests than those without electoral pressure. They could delay the initial adoption of the FPP, grant more conditions for second-child exemptions, and adopt the policy that couples can officially have two children earlier than others.

For the IV, there are two ways of variable classifications: how many rounds of elections the village has held and the initial year of adoption. The first approach is less informative because our analysis is time-sensitive and focuses on the immediate effect of electoral reform. To be specific, some villages introduce elections later than others but still manage to have the same number of elections as the early adopters. In comparison, the second classification method is superior since we can directly compare the ones with the initial elections to the ones without.

Table 2.2: Classification according to the number of elections

Rounds of elections	2	3	4	5	6	7	8	9	10
Frequency	10	21	20	12	67	58	51	4	3

Villages have been held 6 rounds of elections on average, and the total number of elections ranges from 2 to 10. As discussed in Chapter 1, the FPP has been through four stages of development, and I'll examine the immediate accountability effect right after the initial adoption in the early 1980s.

Table 2.3: Classification according to the initial year of adoption

Group	Percentage	Year of First Election
Early Adopter *	25.6%	1984 or earlier
Middle Adopter 1 **	27.2 %	1986 – 1988
Middle Adopter 2 ***	23.6%	1984 – 1989
Late Adopter ******	23.6%	around 1989

Table 2.4: Descriptive Data of The FPP Implementation in Each Stage

	Count	Percentage
Stage 1 (1979 - 1980)	65	52.8%
Stage 2 (1981 - 1983)	32	26.0%
Stage 3 (1984 - 1987)	13	10.6%
Stage 4 (1988 to later)	13	10.6%

Table 2.5: Descriptive Data of the Initial FPP Implementation in Each Stage

	Count	Percentage
Stage 1 (1979 - 1980)	31	34.8%
Stage 2 (1981 - 1983)	22	24.7%
Stage 3 (1984 - 1987)	12	13.5%
Stage 4 (1988 to later)	24	27.0%

Most villages (78.8%) implemented the FPP in stage 1 and stage 2.

To test the immediate effect of holding elections, I choose the second way of variable construction (**Table 2.5**) because we need to know the precise year of the initial adoptions.

Table 2.6: Second Child Exemptions

	Count	**Percentage**
Stage 1 (1979 - 1980)	2	3.8%
Stage 2 (1981 - 1983)	4	7.7%
Stage 3 (1984 - 1987)	12	23.1%
Stage 4 (1988 to later)	34	65.4%

In the social policy arena, public elections should delay the years of initial rollout and the strict implementations of the FPP, as they are against villagers' interests. In contrast, elections push VCs to relax the policy strength as the central government requested and allow second child exemptions. The relationship is summarized in Table 2.7.

Table 2.7: Government Behaviors and the FPP

Operationalization	**Preference**	**Accountable Behaviors**
1. The year of initial implementation	Not preferable	Delay the implementation
2. The year of strict enforcement	Not preferable	Delay the implementation
3. The year of allowing second child	Preferable	Early Adoption

Hypothesis 4.2

To test *Hypothesis 4.2*, chapter 4 treats the amount of public investment as the DV and election competitiveness as the IV. Specifically, it compares the policy delivery in villages with competitive elections to those without competitive elections before and after passing the initial stage of implementation.

Hypothesis 3

To test *Hypothesis 3*, chapter 5 treats the amount of self-funded public projects as the DV and the presence of traditional social factors as the contextual variable, and electoral maturity as the IV. To operationalize the contextual variable, it checks if the VC is from one of the two largest family names. The dataset contains information related to the VC's family name and the two largest family names in the villages. If VCs come from one of the two largest families, we consider the VCs have the potential of receiving kinship support; otherwise, VCs do not have informal support. To a large extent, this is an appropriate measurement of social connectivity as villagers with the same family name cluster together and help each other (Xu and Yao, 2015).

4. Summary

This chapter explains the variable construction, measurements, and operationalization of variables. Also, it describes and justifies the combinations of three quantitative methods (DID and a panel design with FEs). More importantly, it describes the limitations of each method individually and how they can answer the research questions collectively.

Chapter 3

The Policy Effect of Village Elections: A Difference-In-Differences Approach

1. Introduction

Ever since the initial introduction in the early 1980s, western observers have predicted that the embrace of direct elections in the rural parts of China would put a check and balance on government performance. Electoral politics would diffuse into higher bureaucratic structures and initiate a new wave of political liberalization, or even democratization, in China. Three decades later, many of the initial predictions prove too optimistic: the state has no intention of adopting direct mass participation for cadre management outside the village level, and there is no imminent sign of democratization. In contrast, the introduction of elections has increased political efficacy among villagers who believe they can remove corrupted cadres with votes and become more satisfied with the local power configuration, increasing regime stability (Birney, 2007; Li, 2003; Manion, 1996, 2006).

In mature societies, the electoral mechanism rewards good behaviors that fall in line with the electorate while punishing deviating acts (Cain, Ferejohn, and Fiorina, 1987; Fenno, 1978). That is why electoral accountability, most of the time, holds in democracies. However, authoritarian politics operates according to another set of social codes and formal rules. How do electoral politics work in Chinese villages? Has the introduction of the election changed local cadres' behaviors? What are the effects on the policy provision end?

This chapter aims to answer these meaningful questions and proceeds as follows. First, it introduces the two processes that deliver electoral accountability in democratic settings and explains why the primary electoral mechanism also works in authoritarian regimes. Second, it shows the hierarchical position of village cadres embedded in China's bureaucratic structure

and the dual responsibility they are carrying on. On the one hand, they are the policy enforcer for the central government, which rewards faithful implementation of its policy with career advancement. On the other hand, village cadres live with the locals and stay in the same social network. They have to think twice before strictly implementing the policy. Third, it discusses the causal identification strategy and justifies the choice of method, variables, and operationalization. Finally, it concludes with potential design limitations and points out future directions.

2. Electoral Accountability in Democracies: Sanction and Selection

In well-functioning elections, candidates come up with a portfolio of policy solutions and peddle it to the electorate, arguing that the proposed measures would address the most pressing concerns in society. Then, citizens look at the ballot and pick the candidate with the ideal policy portfolio. When the next election cycle comes, they cast their votes again and choose the candidates that deliver the best policy outcomes. The iterative process is designed to provide electoral incentives that condition political representatives' behaviors (Zupan, 1990). Once these incentives are removed, political representatives' behavior would change. For example, retiring members of the American Congress vote less frequently *vis-à-vis* their younger counterparts and vote for their own political ideology rather than the constituency's when they decide to vote (Lott and Bronars, 1993; Snyder and Ting, 2003; Vanbeek, 1991).

Like any other rational choice model, popular criticism of the sanction and selection mechanisms is in alignment with the statement that voters suffer from information deficiency or overload. But, less informed voters can make informed decisions based on reasoning shortcuts, such as "pocketbook" assessment of personal financial well-being and "sociotropic" evaluation of larger-scale national conditions (Fiorina, 1981; Kinder and Kiewiet, 1981).

Besides, ill-informed voters imitate the voting behaviors of other more knowledgeable countrymen (McKelvey and Ordeshook, 1985, 1987, 1993).

In general, the consensus is that voters can distinguish accountable from the less accountable political representatives, who have lower probabilities of rerunning and winning the re-election even if they do so, on average (Glazer and Robbins, 1985; Schmidt et al., 1996). As noted, the two processes are not mutually exclusive: voters select the ideal candidates when one election season begins and sanction bad governance in the next electoral cycle. Politicians with re-election pressure make more efforts on behalf of voters (*sanction*), and incumbents in their later-term years with more job experiences tend to perform better (*selection*), *ceteris paribus* (Alt et al., 2011).

3. Government Accountability in China

The Chinese regime practices a performance-based legitimacy, and its rightful rule primarily originates from the successful provision of public policies, particularly in the economic arena – the state benefits from good governance. In the past, the state has responded to mass participation through other avenues such as protest and acts accountably across many domestic and foreign issues (Chen, 2009; Distelhorst and Hou, 2014 & 2017; Malesky et al., 2012; Truex, 2014; Wang, 2004; Weeks, 2008). In addition, its local political institutions are responsive to citizen requests at a level comparable to other democratic counterparts (Distelhorst and Hou, 2017), though with in-group biases towards ethnic minorities (Distelhorst and Hou, 2014).

As with any other authoritarian regime, the Chinese regime suffers from information deficiency and has no idea of the true level of governing legitimacy. As an avenue of public participation, mass inputs *via* village elections address the informational uncertainty. The electoral results expose unpopular incumbents, sending a signal to the higher governments for

disciplinary actions (Edin, 2003; Li and O'Brien, 1996; O'Brien, 1996; Oi, 1996). As a result, the village elections serve to deliver government accountability (Guo and Bernstein, 2004; Li, 1999; Li and O'Brien, 1999; Manion, 1996; O'Brien and Li, 2000; Oi, 1996; Shi, 1999; Wang, 1997).

Empirically, scholars have detected some behavioral changes after the introduction of elections. For instance, elected officials overhaul the village revenue structure and the allocation of village expenditures in a way that favors local residents over the township government (Zhang et al., 2004). In addition, they increase the share of expenditures in the village budget and reduce the administrative fees handed over to the higher government (Wang and Yao, 2007). So, even imperfect elections have produced enough incentives for accountable behaviors (Brandt and Turner, 2007).

However, other researchers have expressed skepticism, reservations, to say the least, over the significance of village elections. Often, the skeptics and critics adopt a procedural definition of an election, arguing the electoral process in China is not as competitive as in other democracies and thus makes no real impact. Besides, other influential social and political entities vitiate VCs' power. The election has not brought meaningful changes to the power configuration in the Chinese rural governance (Oi and Rozelle, 2000).

These analytical frameworks are parochial and western-centered in the sense that they fail to differentiate the policy significance at the local level from the political significance at the state level. Village elections may fail to bring in any major changes to the system but could have improved the local governing record. This chapter looks at the policy output end and argues that the delivery of policy significance is not contingent upon overhauling the entire system.

4. Empirical Analysis

This section examines the behavioral changes of local leaders after the electoral reform in social and economic dimensions. In the social arena, it chooses the Family Planning Policy (FPP), one of the most crucial social policies in the 1980s and 1990s. Its influence still lingers in today's China. However, it weighs more heavily on a sub-group of villagers than the rest, and not all households have the same level of interest in having more children. It is a private good.

For the economic policy, it compares the amount of public investment in villages with and without elections. As a form of social welfare, all households benefit from the investment and enjoy the same level of access (e.g., infrastructure, education, etc.). Therefore, it is a public good. The combination of social and economic policies provides a holistic view of how electoral participation affects collective life in different ways if any.

4.1. **The Family Planning Policy**

By the late 1970s, the central government had serious concerns that its growing population would drag down economic growth and so attempted to cap the fertility rate. At that time, the FPP came out as a drastic solution to address the population concern. The central government set up regional quotas for the local family planning teams to fulfill (Greenhalgh, 1994). They received rewards for curbing the fertility rate within the target and faced penalties otherwise. The incentive system facilitated the nationwide implementation of the FPP.

In cities, most people were employed by state-owned enterprises and could lose employment opportunities for exceeding the one-child cap. In rural areas, villagers had a harsher implementation and faced penalties, including fines, forced abortion, and other forms of violence. To fight the harsh enforcement, villagers came up with all sorts of tricks to escape

the visit of township monitoring teams. A common tactic was to stay in a relative's house in another town or county during pregnancy and come back after giving birth. By doing so, villagers bypassed the regulations and could have more children.

Table 3.1 A Four-Stage Development of the FPP

	Time Period	**Official Rhetoric**	**Local Guidance**	**Level of Enforcement**
Stage 1	Prior 1980	"One is best, at most two, never a third" *	Soft guidance	No forceful implementation
Stage 2	1981 - 1983	Tighten up and forbids any second childbirths	Getting forceful	Forceful with consequences for policy violators
Stage 3	1984 - 1987	"It would be easier for cadres to do their job if the public is pleased" **	Relaxed	Grant exemptions for a second child
Stage 4	1988 - later	Resolute state control ***	Merciless	Coercive measures with no local input

Notes: * Short and Zhai, 1988; ** Central Document 7; *** Greenhalgh and Li, 1995

Township monitoring teams relied on local leaders who lived in close proximity with villagers to provide information, like which families have pregnant women and how much penalty is appropriate for the violators. The decentralized model granted village heads some leeway if they argued that any forceful measures would backfire and create catastrophic disruptions to social stability. If needed, rural governments can adjust the policy strength according to specific situations. The regional adjustments created a variety of policy

implementation, so there was no uniform policy guidance (Greenhalgh and Bongaarts, 1987; Tien, 1989).

Table 3.1 shows the four-stage development that the policy has been through.

Due to its lenient adoption in Stage 1, the state failed to achieve the intended goal of curbing population growth and decided to tighten up in the early 1980s when all second births were strictly forbidden. However, the draconian nature of the policy led to increased violence and antagonized the society-and-state relation. Given the strong preferences for boys in Chinese villages, the strict implementation caused a high level of female infanticide. Meanwhile, there was a growing grudge towards the drastic state control that resulted in more collect actions. For example, peasants in Shaanxi Province contested the FPP and forced local officials to negotiate new terms of conditions with the township government (Greenhalgh, 1994).

In 1984, the state felt the pain of the widespread dissatisfaction and adjusted the policy accordingly by releasing Central Document 7 ("七号文件"). It repudiated the excessive use of coercion witnessed in the early years and preached more patient methods such as education and cadre persuasion (White, 1990). The state allowed some leeway for maneuver and granted second child exemptions if the firstborn was a girl for rural families. Local officials were allowed to grant exemptions if they made the case that the exemptions would prevent female infanticide (Qian, 2017). Furthermore, villagers were allowed to argue for more conditions for second childbearing (Greenhalgh and Li, 1995). The intention was to create a friendly environment for local cadres if the public was satisfied. In addition, it asked local officials to master the policy spirit in practice but never publicly advocate for it in order to prevent granting too many exemption requests.

There is no extra incentive for VCs without electoral pressure to carry out the relaxations in a timely manner. They can take advantage of the information asymmetry: villagers did not understand the intention of policy relaxation, and VCs can strictly carry out the FPP to meet the quota (Qian, 2013). To play safe, they maintained the policy strength as it was before. However, the electoral reform in some villages incentivized the elected VCs to behave accountably and adopt the relaxation earlier than others.

More formally, this chapter aims to study the policy effect of elections and test the following hypothesis.

Hypothesis 3.1: *The introduction of elections makes local leaders more accountable to villagers by providing better policy provisions in the social arena*.[3]

4.2. **Public Investment and Village Elections**

In 1987, the Organizational Law of Village Committees (OLVC) was on a trial run and proposed elections to select VCs and other village committee members. The law was modified and implemented in June 1988. After then, all provinces were encouraged to adopt direct elections to select local leaders. Finally, in 1998, it was formally adopted by the Chinese National People's Congress.[4] The law clearly laid out the responsibilities of the village authority, among which the most critical issues involve managing investments in public areas, land management, and other social and economic activities.

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[3] Better policy provisions are defined as the ones that would increase the welfare of the villagers either in social and economic aspects.

[4] There are various versions of the OLVC, and this dissertation uses the version that adopted in 1988.

For example, Article 2 stipulates that "*The villagers' committee is the primary mass organization of self-government…The villagers' committee shall manage the public affairs and public welfare undertakings of the villag*e."

Article 4 says that "*The villagers' committees, on their part, shall assist the said people's government in its work. To manage the land and other assets belonging to the collective, to guide villagers to use natural resources properly, and to guide villagers to protect and improve the natural environment*."

It is reasonable to expect divergent behavioral patterns between the leaders with and without electoral constraints. To appeal to the locals, elected VCs put more effort into social investment management and ensure better resource allocation. In contrast, this is not the case for non-elected VCs. They are appointed by the higher governments and have nothing to lose for failing to deliver good governance. In other words, it is more likely for them to shirk their official duties. The amount of investment in public sectors stands for the level of government accountability: an increased amount represents a more efficient resource allocation plan, and a decreased amount of investment exposes VCs who shirk away from the duty.

Chapter 3 hypothesizes that elected VCs are more likely to put more effort into public investment and less likely to shirk responsibility. More formally, it tests the following hypothesis.

Hypothesis 3.2: *The introduction of elections makes local leaders accountable to villagers by providing better policy provisions in the economic arena.*

4.3. **Method**

To test Hypothesis 3.1, chapter 3 applies unpaired two-sample T-tests to see if there is any statistically significant difference in the adoption years of policy relaxations after the electoral

reform. To test Hypothesis 3.2, it combines matching with difference-in-differences (DID): it matches the treated villages with the control villages according to key socio-economic covariates. The matching method is a standard statistical procedure that reduces the dissimilarity between the experimental groups. Then, it uses the DID method to examine the behavioral changes in areas with and without elections before and after introducing elections. As a quasi-experimental design, the DID design does not require a random assignment process but still contains a high inferential power. Its inclusion is desirable because of a clear temporal cutoff point that allows us to examine the intervention. The combination fits well with our research context.

4.4. **Data and Variables**

Dataset

This chapter uses the Village Democracy Survey (VDS) dataset, and chapter 2 contains more information about its sampling strategy. The most important aspect of the dataset is that villages cannot self-select into the treatment group or weigh any influence over the assignment process. Instead, the decision comes from the higher authorities (e.g., township, provincial) with no direct input from the local level.

Dependent Variable

To test Hypothesis 3.1, this chapter treats the adoption of the second-child exemptions as the social DV: early adoption represents accountable leaders, and late adoption suggests the lack of willingness to accommodate citizen demands. The VDS asks questions, like "*Write the years (if any) that couples in this village are officially allowed to have a second child if the first is a girl*."

Within the DID framework, my analysis treats the timespan from 1983 to 1987 as the prior period and 1988 to 1992 as the post-treatment period and averages out the values over the 5-year period. This is a recommended statistical adaptation for two reasons. First, it takes time to walk through the policymaking process, and the 5-year time range best reflects the situations when some local efforts have been made but may take a while to detect any policy changes. Practically speaking, only a few cases are falling into each year, and it creates a small sample size problem and a low inferential power if we choose a single-year timespan. Second, taking averages eliminates any single-year outlier and enhances comparability between the two experimental groups.

The dataset also asks for two other aspects of the policy: the initial year of adopting the FPP and the year of officially not being allowed to have a second child.[5] As both policies took place before the electoral reform, they should bear no causal relationship with the introduction of elections. So, they serve as placebos. The reform should only affect the adoption of relaxation but not the placebo policies.

To test Hypothesis 3.2, the chapter treats the total amount of public expenditure as the economic DV: a higher amount represents more efforts put into providing social service, signaling more accountable officials. The VDS surveys the amount of public investment each year dating back to the early 1980s, the type of major investment, and the funding source of

[5] In its original language, the VDS asks "*Write the year that this village began to officially implement the One Child/Family Planning Policy*" and "*Write the years (if any) that couples in the village are officially not allowed to have a second child no matter whether the first is a girl or not,*" respectively.

investment. There are six categories of public investment: education, roads, electricity, water conservancy, forest conservancy, and others.[6] The analysis treats different types of investment as equal and adds up the total amount at the village/year level. This is an appropriate adaption because villages have different needs, and thus we should not expect a uniform investment strategy. As a robustness check, the chapter reruns the statistical analysis by disaggregating the types of public investment and checking for any incongruences.

For the source of investment, there are seven categories: specialized loans for aiding the poor, provided by the higher government, fees paid by farmers for overall township planning and village reserve ("村提留"), village reserve（"村积累"), the fund provided jointly by village, township, and county, the fund raised from villagers, and others. My analysis traces back to the source of funds and combines all sources of funds that involve villagers' input. Supposedly, if it has brought any positive psychological impact, village elections should have improved public trust and satisfaction, leading to increased public funds raised from villagers voluntarily. It suggests that, with the presence of electoral sanctions, villagers feel safer with how the village affairs are managed and are willing to chip in voluntarily for public social service.[7]

Independent Variable

[6] Here, it refers to other types of public project besides the above-mentioned types. It does not include spending on salaries of government employees who are paid by the township government.

[7] Local governments have no right to raise tax for social projects. Chapters 4 and 5 have discussed this issue further.

The independent variable, IV, is a dichotomy variable of whether the village has held its first election before or in 1987: 1 if yes (treated group) and 0 if no (control group). To deal with cases with missing values on key metrics, the analysis averages the potential treatment effects over the population size, a standard practice within the DID framework (Card and Krueger, 1994).

4.5. **Empirical Results and Discussion**

Table 3.2 contains some descriptive data of these three policies. For the two placebo policies, there is an asymmetrical distribution with heavy left-tailed cases that adopt the FPP in Stages 1 and 2 (before 1984). For the experimental policy, 21% and 55% of the total cases adopt the exemptions in Stages 3 and 4, respectively.

Table 3.2 Descriptive Data of Three Public Policies

	Adopting the FPP		**Officially Not Allow A Second Child**		**Second Child Exemptions**	
	Count	**%**	**Count**	**%**	**Count**	**%**
Stage 1 before 1980	142	71	58	50	22	13
Stage 2 1981 - 1983	33	16	22	19	16	10
Stage 3 1984 - 1987	13	6	12	10	35	21
Stage 4 1988 - later	13	6	24	21	91	55
Total	201	100	116	100	164	100

As discussed, the different distribution patterns of the treated and placebo policies originate from the early years of adoption. As noted, the second-child exemptions can be granted before

1984 under extreme conditions, as this is the case in 38 villages or 23% of the total exemptions granted.

Table 3.3.1 contains more descriptive data about the policy exemptions. Relatively speaking, the distributions of the experimental groups are quite similar. For the treated group, the adoption years range from 1963 to 2004, with a standard deviation of 7.238 and a mean of 1986. For the control group, the adoptions range from 1973 to 2003, with a standard deviation of 7.345 and a mean of 1989.

Table 3.3.1 Further Descriptive Data of Policy Exemptions

	Treated Group	**Control Group**
N of Cases	98	77
Min.	1963	1973
Max.	2004	2003
Range	41	30
S.D.	7.238	7.345
Mean	**1986**	**1989**

Table 3.3.2 (see the appendix) presents further social-economic metrics of the treated and control groups. The first metric gauges the distance to the nearest high school. In typical Chinese villages, there are no in-house high schools, and rural students have to travel to a nearby town for continuing education after middle school. The distance controls for specific geographical characteristics of villages. The averages for the experimental groups are 13.24 and 10.26, respectively.

The second control is the presence of a village clinic. As can be seen, 88% and 86% of villages in the treated and control groups have clinics, respectively. This is the same situation with the average distance to the nearest clinic for those with no in-house clinics. On average, the treated group is located 3.433 km away from the nearest clinic, and it takes 3.517 km for the control group. The control and treated groups look similar in a broad range of metrics and thus relatively comparable.

Table 3.4 Unpaired Two-Samples T-test of The Treated and Control Groups

		Treated	**Control**	**p-value**	**95% C. I.**	**Result**
Placebo Policies	The year began to implement the FPP	1978	1978	0.8304	[-1.138, 1.417]	No Difference
	The year officially not allowed to have a second child	1982	1984	0.127	[-5.005, 0.635]	No Difference
Treated Policy	The year that allows Second child exemptions	**1986**	**1989**	**0.0419**	**[-4.490, -0.085]**	**Significant Difference**

Notes: The year is the average value of all observations in that category.

Table 3.4 contains empirical evidence supporting Hypothesis 3.1: village elections have shifted the direction of social policy implementation in favor of local residents. Statistically speaking, the causal effect of the first election across villages, on average, pushes for the early

adoption of the policy relaxation three years ahead of the villages without elections. The treatment group adopted the exemptions in 1986, and the control group procrastinates until 1989. After conducting an unpaired two-samples T-test, the result is significant at the 95% level.

In Chinese villages, VCs are perceived as parent-figure leaders responsible for villagers' well-being, a social codebook that VCs adhere to closely. Any non-compliance may be perceived as a betrayal of the kinship with serious consequences. They lose social trust and face sanctions. In comparison, the social accountability effect is more salient in villages with elections in place since disgruntled villagers can punish corrupted cadres by voting them out in the next election season. VCs have to think twice about the extent to which the policy should be carried out and relax the policy strength if possible. However, this is not the case in villages that have not introduced elections, as appointed VCs face no extra incentives to accommodate local needs.

Table 3.5 A DID Analysis of the Effects of Village Elections in Public Investment (Aggregated)

	Treated	**Control**	**Differences**
Before 1987	19.2[1]	15.7	3.5
After 1987	43.9	5.1	38.8
Change in mean (after-before)	24.7	-10.6	**35.3**

Note: 1. The investment is in ten thousand RMB.

It seems that VCs have made a reasonably good judgment call and understand how electoral politics works, even with no prior life experience. The electoral reform has made local leaders more accountable to villagers by providing better social welfare provision than their unelected

counterparts, *ceteris paribus*. As expected, there is no significant policy shift in the two placebo groups.

Table 3.5 supports Hypothesis 3.2. Holding elections increases the public investments dramatically by ¥353,000, or an increase of almost 130%. Before the treatment, the treated and control cases had a roughly equal amount of public investment, ¥192,000 and ¥157,000, respectively. However, the introduction of elections in the treated cases increases the investment amount to ¥439,000, while the control group slides to ¥51,000. As the DID analysis suggests, authoritarian elections enhance VCs' efforts to address citizen demand for better economic accountability in multiple public sectors (e.g., education, infrastructure, etc.). The result stands even after we disaggregate the fund into the investment types.

Table 3.6 A DID Analysis of The Fund Raised from Villagers

	Treated	**Control**	**Differences**
Before 1987	11.5[1]	16.3	-4.8
After 1987	87.6	2	85.6
Change in mean (after-before)	76.1	-14.3	**90.5**

Notes: The investment is in ten thousand RMB.

Table 3.6 contains the results after re-applying the DID framework to the fund raised from villagers after the reform. Interestingly, villagers with elections tend to trust the local officials more and voluntarily raise an additional amount of ¥90,500, on average, to fund public projects. The treated and control groups look quite similar before the treatment, with the untreated group having a higher investment amount, but the pattern reversed after the reform as villagers put more money into public funds. The increased amount sends a positive signal of policy

significance of elections that the villagers perceive electoral politics as effective in constraining VCs' behaviors.

As a research caveat, the investment level was low in the 1980s and 1990s, so any amount of increase creates a jump in the result. To address this concern, the empirical analysis has adopted various ways of constructing the variables, such as including or excluding the boundary years, averaging over per village/year or per village/policy/year, and the (positive) directional take of holding village elections still holds though with some variations of the effect size.

5. Research Limitations

The DID generates biased estimates of the coefficients if the parallel trends assumption does not hold. Unfortunately, there is no formal statistical solution to test for the assumption. A common approach is to introduce multiple time point inputs before the intervention and visually check for the parallel trend. Due to data unavailability, it is not possible to do so. The inability to check the parallel assumption poses the most significant constraint on any DID design.

6. Conclusion

In this chapter, we have successfully tested Hypothesis 3.1 and 1.2 and found evidence supporting the claims that the village elections have shifted the direction of policy implementation, both socially and economically. The presence of elections pushes VCs to relax the implementation of a widely unpopular policy and put more effort into resource reallocation and public investment. No obvious gap between the provisions of the social and economic policies has been detected.

This chapter challenges the traditional wisdom that political institutions do not function well in a less institutionalized environment, such as China's. Even with no prior life experience, Chinese villagers seem to understand that they have some leverage over rural governance by punishing bad performers. In the meanwhile, VCs realize the continuation of power comes from how many votes they can get and thus try to deliver better governance to appeal to the public. The findings suggest the elections may not lead to the democratization process in China but certainly make local officials more accountable.

However, this is in no way saying authoritarian elections have replaced the traditional roles of other social and political players, at least not in the early days. The following chapters dig deeper into the evolving nature of authoritarian elections over time and how they interact with other networks of accountability.

7. Appendix

Table 3.3.2 Social-Economic Variables of the Two Experimental Groups

	Treated		**Control**	
***Control 1*: The distance to the nearest high school**				
Min.	0.5*		0.5	
Max.	150		53	
Range	149.5		52.5	
S.D.	20.179		9.98	
Mean	**13.24**		**10.26**	
***Control 2*: If there is a village clinic present?**	**Count**	**%**	**Count**	**%**
Yes	80	88	65	86
No	11	12	11	14
***Control 3*: The distance to the nearest clinic?**				
Min.	0.5		0.2	
Max.	24**		18	
Range	23.5		17.8	
S.D.	6.324		4.764	
Mean	**3.433**		**3.517**	

Notes: * The unit of distance is in kilometers (km); ** the dataset contains an outlier value (150), which stands three standard deviations above the mean. So, the analysis excludes it from the analysis.

As a quasi-experimental method, the DID method calculates the effect of an intervention (in this case, election) by comparing the average changes in the outcome variable (government accountability) in the treatment group to the average changes in the control group by taking differencing twice. Assuming a parallel trend between the two experimental groups, it controls for unobserved cofounding variables and allows only one variable (the intervention) to change between two time periods (Deschenes and Meng, 2018).[8]

Although not as robust as true experimental methods, the inclusion of a DID design is preferable for this project for two reasons. First, it does not require a strict exchangeability assumption and stands out when we have no knowledge of the assignment procedure or when the assignment process is not random (Gertler et al., 2016).[9] As mentioned above, the selection process remains ambiguous, and no definite criteria have been set to select the first-batch experimental cases.

Second, the DID design allows the treatment and control groups to be unbalanced in the covariates before the intervention. It assumes that any prior differences between the

[8] Deschenes, O. and Meng, K.C., 2018. Quasi-experimental methods in environmental economics: and challenges✶ Opportunities. *Handbook of Environmental Economics*, *4*, p.285.

[9] Gertler, P.J., Martinez, S., Premand, P., Rawlings, L.B. and Vermeersch, C.M., 2016. *Impact evaluation in practice*. The World Bank.

experimental groups stay constant throughout the process, facilitating causal attribution. The DID design can be represented as follows.

The DID design adopts the following identification strategy using Potential Outcomes Framework (POF) notations.

Table 3.7: Identification Strategy for DID

	Before	After
Treatment	α	β
Control	γ	δ

The estimand of the DID can be calculated as follows:

$$ATT \equiv$$

E[Treated group after the intervention – Control group after the treatment | if treated] =

$$(\hat{\beta} - \hat{\alpha}) - (\hat{\delta} - \hat{\gamma}) =$$

$$E[Y_i|D_i=1,T_i=1] - E[Y_i|D_i=1,T_i=0] - \{E[Y_i|D_i=0,T_i=1] - E[Y_i|D_i=0,T_i=0]\}, \quad \textit{equation 1}$$

where

- ATT: The Average Treatment Effect on the Treated
- Y_i: the level of government accountability measured by the policy strength in village i
- D_i: the treatment condition
  - D_0: control group
  - D_1: treatment group
- T_i: the years before and after the first election
  - T_0: pre-treatment
  - T_1: post-treatment

The fundamental problem with any causal attribution is that it is impossible to observe the same unit, both treated and not treated simultaneously. We either observe the treated or the untreated scenario. In our case, the treated group if not treated, as in the POF notation $E[Y_0(1)|D=1]$, is not directly observable. The design creates a comparable counterfactual scenario by holding statistical assumptions. In *equation 1*, the first differencing of the treatment group $(\hat{\beta} - \hat{\alpha})$ takes away the variability of time-invariant factors before and after the intervention, since we are comparing the same experimental group to itself. The characteristics at the unit level do not change over time.

However, the first differencing does not capture time-varying factors. An alternative explanation of any potential differences observed between the treated and non-treated groups could be driven by time-sensitive factors. For instance, the Chinese government decides to liberalize its economic grip between two time points, resulting in more robust economic growth in villages, regardless of the involvement of local officials.

To eliminate the influence of time, we assume the time-sensitive factors affect the two experimental groups equally and take a second differencing of the control group $(\hat{\delta} - \hat{\gamma})$ to measure the before-and-after changes (Gertler et al. 2016).[10] After differencing out both time-vary and time-invariant variations, the DID design eliminates the primary source of bias and ends up with an unbiased estimator.

[10] Gertler, P.J., Martinez, S., Premand, P., Rawlings, L.B. and Vermeersch, C.M., 2016. *Impact evaluation in practice*. The World Bank.

As a caveat, the DID method obtains the estimate of the ATT rather than the Average Treatment Effect, ATE, of the population. ATE measures the average effect of the treatment across all individuals in the population if treated, as in *equation 3*.

$$ATE =$$

$$\{\pi E[Y^1|D=1] + (1- \pi)E[Y^1|D=0]\} - \{\pi E[Y^0|D=1] + (1- \pi)E[Y^0|D=0]\}, \qquad \textit{equation 3}$$

ATT equals to ATE under two conditions:

- $E[Y^0|D=1] = E[Y^0|D=0]$
- $E[Y^1|D=1] = E[Y^1|D=0]$

In real life, these two assumptions are difficult to obtain. There is not enough evidence to test whether they hold in our case, and so my research focuses on the ATT.

Assumptions

This section contains statistical assumptions that the DID method needs to hold with reference to our research questions.

1. *Positivity*. For any village i, there is a non-zero possibility of receiving the treatment (election). The possibility of assigning into the treatment group is not determined by the outcome at baseline. It means that no village i is guaranteed of assigned into the treatment group nor the control group. In statistical form, the positivity assumption can be stated as follows:

$$0 < P(D = 1|X) < 1, \text{ for all } X.$$

This assumption holds for our research case. As described, the villages that meet specific selection criteria are chosen from the available pool. No archives or official record indicates any village is guaranteed of selected into the experimental group.

2. *Parallel Trends Assumption*: $E[Y_0(1) - Y_0(0)|D=1] = E[Y_0(1) - Y_0(0)|D=0]$. It assumes a parallel trend between the treatment and control groups. Any differences between the two experimental groups stay the same over time without the intervention.

Arguably, this is the most critical assumption that the DID design has to hold. Any assumption violation will introduce biased estimations because the covariates associated with the outcome variable are not balanced in the experimental groups before the intervention. The unbalanced covariates make it impossible to attribute the causal effect back to the intervention because of prior covariates differences. If that is the case, we need to apply the Propensity Score Matching to create comparable controlled cases (Lechner, 2010, p.214). Unfortunately, there is no formal test that we can use to check for this assumption, and we rely on visual inspection of the treated and non-treated groups for a longer period.

3. *Stable Unit Treatment Value Assumption (SUTVA).* SUTVA has two parts: the units stay in the same experimental group without interacting with the other research group.

    - Consistency: $Y(T) = (1-D)*Y_0(T) + D*Y_1(T)$. Treated cases stay in the treatment group, and non-treated cases stay in the control group throughout the research process. The VDS holds the complete list of election years, and we can check when the village of interest holds an election and whether there is an intermission.

    - There is no spillover between the experimental groups. In other words, holding elections in village i does not affect the possibility of holding elections in village j. The no-spillover is also an obtainable goal. The level of social mobility in Chinese rural areas stayed low until the late 1990s, when peasants migrated to cities and worked as cheap labor. Besides, VCs merely have to be responsible for the electorate living in the

same village, and it is up to the upper governments to decide who can hold elections with limited input from the local villages.

For these reasons, the SUTVA assumption holds. As mentioned, the DID repeatedly observes the same units over time, and we may run into serial autocorrelation associated with time (within the unit) and heteroscedasticity that exists between the units (Gertler et al., 2016).[11] To address these two issues, we adopt cluster standard errors at the village level (Abadie et al., 2017; Bertrand et al., 2004; Cameron and Miller, 2015).

[11] Gertler, P.J., Martinez, S., Premand, P., Rawlings, L.B. and Vermeersch, C.M., 2016. Impact evaluation in practice.

Chapter 4

A Longitudinal Analysis of Electoral Competitiveness and Policy Provision

4.1 **Introduction**

As an institutional establishment, elections do not eliminate political factions or groups of divergent interests but provide a discussion forum that allows them to voice their concerns and interests in an orderly manner (Paster and Tan, 2000). Contested elections induce uncertainty in the outcome, as no one can manipulate the electoral outcome *ex ante* or *ex post facto*, which facilitates mass participation that helps democracies survive through severe crises (Almond and Verba, 1963; Przeworski, 1988; Przeworski et al., 2001).

A common misunderstanding in the existing electoral literature is that authoritarian regimes do not invest in electoral procedures since they do not rely on general elections for governing legitimacy. Moreover, the public in non-democracies fails to meet the minimum requirement for citizenship and lacks political interest and sophistication to understand formal politics.

Both claims prove to be unfounded. First, holding elections at the local level conveys informational utility for authoritarian regimes (Brownlee, 2007; Gandhi, 2008; Geddes, 2006; Magaloni, 2006; Malesky and Schuler, 2008; Simpser, 2013). In the Chinese context, the central government adopted village elections to cope with the governing crises in its rural parts. Peng Zhen, the then vice-chairman of the National People's Congress Standing Committee, had graving concerns about the deteriorating cadre-villagers relationship and said, "who supervises rural cadres? Can we supervise them? No, not even if we had 48 hours a day" (O'Brien and Li, 2000). Therefore, he advocated for self-rule at the village level and treated the election as an institutional instrument of good governance (Shi, 1999).

Also, citizens in authoritarian regimes are well informed and sophisticated enough to navigate through the complicated electoral process (Kennedy, 2002). They have a superb understanding of the institutional designs and know how to express their concerns and dissatisfaction. For instance, citizens in the Soviet Union abstained from single-candidate elections to protest against the non-competitive nature of the plebiscitary elections (Gilison, 1968; Karklins, 1986).

As this dissertation argues, it takes time and prerequisites for political institutions to take root and perform well. According to the new institutionalist theories, political actors are a product of institutional context (Thelen and Steinmo 1992, p.6). Once the environmental conditions change, political actors respond to and adapt to new environmental settings. Thus, it is reasonable to assume institutions function differently after becoming more embedded in the surrounding environment.

Village elections were introduced in the early 1980s when the production brigade (*shengchan dadui*) and people's communes (*renmin gongshe*) dissolved. At that time, villagers had a low level of trust in the newly formed political institution. After several rounds of elections, they may have adapted to the new institutional context and changed their behaviors accordingly. Unfortunately, little scholastic effort has been made to incorporate the longitudinal scope of analysis and treat elections as a dynamic institution in authoritarian regimes.

This chapter fills the gap in the literature and centers its argument around an overarching question: do more competitive elections bring in better policy provisions at the local level? It takes full advantage of the panel data and adopts a dynamic time series perspective of the relationship between electoral competitiveness and policy outputs over the years.

The chapter proceeds as follows. First, it comes up with a comparative perspective and identifies institutional learning in several fields of Comparative Politics before shifting back to the Chinese case. Second, it adopts an institutional perspective and answers two sub-questions: 1). how do new institutions cause behavioral changes? 2). how do competitive elections lead to better policy provisions? Third, this chapter breaks down the concept and defines electoral competitiveness from multiple perspectives. In the empirical section, it presents variable constructions, measurements, operationalization, the causal identification strategy, and data analysis. Finally, it concludes with potential design limitations and future research directions.

4.2 **Institutional Learning in A Comparative Perspective: Elections and Beyond**

Political institutions are a set of rules and procedures that condition human behaviors (Levitsky and Murillo, 2009). To achieve the intended goals, institutions specify desirable behaviors and offer positive incentives (*via* rewards) for compliance and punish bad behaviors through negative incentives (*via* punishment). Individuals respond to the incentives and coordinate with other community members to form a uniform understanding of appropriate behaviors.

In the early formative years, institutions fail to express the effects as designed as social members have not reached a common understanding of how institutions supposedly work. After rounds of intimate interactions, political actors adjust their behaviors and adapt to new institutional arrangements as the contextual conditions permit (Thelen and Steinmo, 1992). This is the reason why it takes time and contextual preconditions for new institutions to take root and become socially embedded, a particular challenge that prevents many developing countries from becoming more institutionalized (Huntington, 1968).

In several branches of Comparative Politics, researchers have identified time-varying treatment effects of political institutions. For example, in the Political Party and Representation literature, electoral rules have a declining influence on ideological congruence in the last decade *vis-à-vis* in the previous decades, as voters converge to the median position of plurality parties in majoritarian elections (Powell, 2009). In the Norwegian Congress, party magnitude exerts time-dynamic effects and follows a cycle: initially, party magnitude has little effect on female representation before the issue comes to the spotlight. Then, with the rise of social movement and public demands, party magnitude plays an increasingly significant role. However, its effect diminishes once women become influential players in party politics (Matland, 1993). In the democratization literature, a high inflation rate decreased the likelihood of democratic consolidation before the 1970s but not afterward (Gasiorowski and Power, 1998).

In addition to the passage of time, political institutions require stable contextual factors to work as intended. In weakly institutionalized systems, plurality and majoritarian electoral systems fail to constrain the number of political parties (Cox, 1997; Moser, 1999; Sartori, 1986, p.62). This is the case because the formal electoral punishment mechanism does not work as expected in a less institutionalized environment than in mature societies; instead, non-electoral participation works better in making government responsive (Cleary, 2007; Grossman, 2014).

Following the same line of argument, it takes time for the villagers to acquire institutional knowledge and be familiar with the electoral procedures. They may be skeptical of the election's practical value and reluctant to participate in the initial days. After a few rounds of trial and error, they begin to experience the process personally and become more involved. After all, research has confirmed that village elections leave long-lasting psychological impacts among villagers. Individually, villagers feel more empowered and hold a higher

political efficacy after completing their first elections (Li, 2003). Electoral results foster the belief that villagers can remove or damage corrupted cadres and local leaders are trustworthy (Li, 2003; Manion, 2006; Shi, 1997). The enhanced subjective values increase villagers' external political efficacy, leading to more active participation that may reshape the political landscape in Chinese villages (Li, 2003). A plausible projection is that an increased sense of political efficacy brings in more electoral accountability amongst the elected and non-elected cadres (Landry et al., 2010). Together, the electoral process empowers the elected VC branches, especially when they control substantial economic resources (Guo and Bernstein, 2004; Li and O'Brien, 1999). Regrettably, these works lack a longitudinal scope and fail to track whether the empowering effect translates into substantial policy outputs.

4.3 **Electoral Competitiveness, Outcome Uncertainty, and Policy Provision**

In this section, we look at how electoral incentives cause behavioral changes both in democracies and non-democracies in sub-section 4.3.1 and review how competitive elections affect policy provisions in Chinese villages in sub-section 4.3.2.

4.3.1 **Why Direct Elections Cause Behavioral Changes**

Scholars have identified behavioral changes after introducing direct elections in democracies. For example, Foster and Rosenzweig (2004) embed a two-party voting model and show that the poor constituency induces resource reallocation in a way that favors the poor in India. In specific, local leaders allocate more public funding to irrigation in areas with a high proportion of farmers and roads in areas with more landless laborers.

Nevertheless, scholars have spotted the same type of behavioral shifts in cadres and villagers in the Chinese case. Adopting an analytical framework from Political Economy, Zhang et al. (2004) argue that rural elections do not change the overall revenue size but significantly shift

the taxation burden from individuals to the enterprise. The taxation shift is due to the introduction of electoral accountability, and so the local cadres respond to public demands. Besides, elections disincentivize power holders from rent-seeking in rural China, mostly because of increased public supervision (Brandt and Turner, 2003).

To further explore the factors that decide the level of public goods investment, Luo et al. (2007) develop three categories of public projects – roads and bridges, irrigation and drainage systems, and school – and identify direct elections as a positive contributing factor and the rural Tax for Free fiscal reform as a negative factor. Their work is of pioneering nature but unfortunately suffers from a few methodology limitations, including reverse causality between holding elections and preferable public policies and missing unobserved variables. These are typical design constraints of using cross-sectional data.

In a follow-up paper, Luo et al. (2010) identify a similar phenomenon: publicly elected village leaders deliver better and more public goods investment than their non-elected counterparts appointed by the township government. However, their findings come from a non-representative sample with a limited sample size, limiting its generalizability. In contrast, this chapter adopts a longitudinal panel design with a representative sample and avoids the design constraints of observational studies.

4.3.2 **Why Competitive Elections Lead to Better Policy Provisions in China**

Ever since its introduction in the early 1980s, rural elections have been through multiple stages of development and changed their level of competitiveness along the way. At first, the level of uncertainty remains low due to the CCP's dominance over the nomination process (Pastor and Tan, 2000). In addition, the dual existence of power structure in Chinese villages – appointed Party Secretaries and publicly elected village heads – puts the elected officials in

a less advantaged position, which further establishes the Party's dominance and reduces electoral uncertainty (Oi and Rozelle, 2000). Later on, the dynamic relationship between the Party and the public shifts towards the latter as the nomination channel opens up and introduces more variability. Not until then, the concept of electoral competition was formally introduced in the process.

By design, the level of electoral competitiveness is positively correlated to the policy output: contested elections bring in better policy outcomes. This is so via two mechanisms. First, voters are more likely to identify with the best candidate if provided with multiple options. In addition, more people turn out to vote if the process is viewed as free and fair (Li, 2003). A wide scope of public participation raises the bar and expectations of better policy provisions. Second, the winning candidate faces more scrutiny and has more incentives to perform well. Otherwise, they would be voted out of office when the next election season comes (Birney, 2007; Shi, 1997). Reportedly, more than 30% of incumbent village leaders were removed from office in Shandong province in 1994 (Shi, 1999). In turn, a better governing record attracts a larger crowd next time, creating a positive policy feedback loop.

As Manion (1997) points out, the policy congruence between village leaders and the electorates is not exclusively the result of the shared local environment, informal network, and socialization factors. However, it is also significantly associated with the formal process of how elections are being held. In the old days that village chiefs were appointed by the upper authority (mostly township government), they were less likely to be accountable to the people in the village than in the latter days with competitive elections (Fan, 2001).

4.3.3 **Definition of Electoral Competitiveness**

The existing literature argues for a positive relationship between electoral competitiveness and cadre accountability (Brandt and Turner, 2007; Kennedy et al., 2004; Li and O'Brien, 1999; Tsai, 2002). However, these works focus on a single aspect of elections and thus define electoral competitiveness narrowly. Besides, they lack a longitudinal scope to track how electoral competitiveness affects policy provision over time.

This section defines what constitutes a competitive election from different perspectives and looks at three aspects: the channel of nomination, *cha'e* or *deng'e*, and voting turnout.

Channel of Nomination

First, we look at the source of candidate nominations. It is the process that generates a candidate slate and decides who will be running for office. Therefore, the nomination procedure is the most important step in ensuring election quality (O'Brien and Li, 2000). There are several channels of generating a candidate, including Party Branch, joint nomination by groups of five to ten villagers, village small groups (the old production brigades, *村小队*), village representative assembly, local NGOs, and self-nomination (Pastor and Tan, 2000).

In the early days, the Party Branch at the township government held a tight grip on the nomination process and prohibited public input. They unitarily decided on the running candidates. No wonder local officials held grudges against the newly introduced electoral reform that took away their prerogatives. But, they did not dare to challenge the rules publicly. So, they formally carried out the policy but covertly subverted its intent (McCormick, 1990, p.148). A popular tactic was to put only one party-sanctioned candidate on the ballot, and an election served no more than a rubber stamp of the party's nomination. The township government can dictate the electoral result if the public nomination is not available (O'Brien and Li, 2000; Zhong, 2000, p.282).

The nomination process became more institutionalized and allowed for the public after the central government intervened in the following years. Approaching the end of the electoral reform around the 2000s, more villagers can contribute to the candidate slate and nominate candidates they prefer. Those publicly endorsed candidates sometimes even won the race against the candidates supported by the Party. As seen, the relationship between electoral competitiveness and outcome uncertainty remained dynamic and fluid throughout the reform duration. The party-dominated channel reduces electoral uncertainty, and the public channel induces electoral uncertainty. To be a contested election, villagers should be able to directly nominate candidates they prefer; otherwise, it is not a competitive election.[12]

Cha'e* or *Deng'e

Second, we check the ratio of the minimal number of competing candidates against the available seats, namely how many people are competing for each seat. If multiple candidates are competing for each seat, then it is called *cha'e* (差额); otherwise, it's called *deng'e* (等额). The relative ratio provides a viable signal of a competitive election that induces electoral uncertainty. If there are many running candidates, it becomes more difficult to predict which one is going to win. If only one candidate competes for the seat, we know the result before it starts.

Based on a study of 336 villages, 51.6% of the surveyed samples had held *cha'e* elections by 1993 (Shi, 1999). Since 1995, the MoCA has formalized the criteria and required all VC elections to be held in a *cha'e* manner. Therefore, 1995 is often considered the cutoff year that

[12] The CCP is the only political organization that can nominate candidates.

distinguishes the initial and mature years of village elections in China (Martinez-Bravo et al., 2011 & 2017).

As expected, local governments always came up with a coping strategy to retain control. Since the MoCA only requested providing multiple options per seat but did not specify how many, a common tactic was to place an unqualified candidate against the incumbent or put up a husband and a wife match (O'Brien and Li, 2000, p. 485). So, we have to take this measurement with a grain of salt and combine it with other metrics. One-candidate elections have a high degree of electoral certainty, and *cha'e* competitions induce uncertainties.[13]

Voting Turnout

Third, this chapter seeks help from the public side by including voter turnout. As the direct consumers of elections, local villagers' voting behaviors send the most accurate rating of electoral quality. A genuinely competitive election should attract a larger crowd and boost the voting turnout. In contrast, a non-competitive election that merely pays lip service to democracy damps citizen enthusiasm and drags down the turnout.

As mentioned above, political participation is voluntary, and the state is less influential in mass mobilization in the post-Mao era. Chinese citizens walk away from non-competitive elections to protest (Shi, 1999). Moreover, villagers are well informed and sophisticated enough to distinguish contested elections from cosmetic ones and understand how electoral mechanisms generally work (Kennedy, 2002). To compensate for the lack of formal education, they resort to their household economic conditions as heuristic cues and personal experience

[13] Basically, election serves no more than a rubber stamp and certifies the sole party-nominated candidate in a single-candidate election.

to make informed decisions (Pastor and Tan, 2000). So, a high voter turnout indicates a competitive election, and a low turnout represents a non-competitive election.

This chapter connects the level of electoral competition with policy output and aims to test the following hypotheses:

Hypothesis 4.2: *Election competitiveness leads to better policy provisions only after passing the initial stage of implementation.*

5. Research Design

This section describes the overall research design, variable constructions and operationalization, and the causal identification strategy. The following subsections contain specific technical details.

Method

This chapter adopts a panel design with two-way fixed effects. A panel surveys the same group of research subjects repeatedly at more than one time period. Similar to the DID method, the panel design accounts for the time-varying and time-invariant factors and examines the differences between the treated and non-treated groups at more than two times. This is why a panel design is considered a generalized version of the DID estimator because of its inclusion of multiple time inputs and observations (Deschenes and Meng, 2018).

A panel design can be further divided into balanced and unbalanced configurations. A balanced panel design has complete data input for all units at all time points, and an unbalanced panel design has missing values for some observations. As mentioned above, not all villages

hold elections for each year, and many villages do not have observations for specific years, requiring an unbalanced panel design.[14]

In mathematical form, a panel design can be represented in the following form (Baltagi, 2005):

$$y_{it} = \alpha_i + X_{it}'\beta + \mu_{it},$$

$$i = 1, 2, ..., N,$$

$$t = 1, 2, ..., T$$

where:

- y_{it} is the dependent variable where i denotes villages and t denotes the year
- α_i is a scalar (slope coefficients) that varies across units, aka. village-specific unobserved heterogeneity
- β is K*1 matrix of parameters
- X_{it} is the ith observation on K explanatory variables
- μ_{it}: the error term of village and year, aka. idiosyncratic error

For the error term μ_{it},

$$\mu_{it} = \mu_i + \lambda_t + v_{it}$$

where:

- μ_i denotes the unobservable village effect. It accounts for the time-invariant but village-specific effect that is excluded in the regression.
- λ_t denotes the unobservable time effect. It accounts for the village-invariant but time-specific effect that is excluded in the regression.

[14] In R, we use the plm package for the unbalanced panel data analysis.

- v_{it} denotes the reminder stochastic error minus the time-invariant part at the unit (village) and time levels

The most challenging part of identifying the causal effect is the presence of unobserved heterogeneities at the village and year levels that affect the amount of public investment. At the village level, some remote villages are located far away from the township and thus have disadvantages in terms of receiving public investment. Some years may have better national macro policies than others at the year level. It leads to biased estimates if we fail to account for both sources of bias. Since these heterogeneities are unobservable, it is impossible to include them in the linear regressions. For example, Ordinary Least Squares models generate biased and inconsistent estimates due to the correlation between the error term and the dependent variable.

This chapter adopts a panel design with two-way fixed effects (FE) at the village and year levels to control the omitted variable bias due to unobserved heterogeneity. Specifically, time-invariant variables (e.g., geographic location) do not change over time for one village but differ across villages. A FE model controls for these time-invariant variables. In FE models, villages serve as their own controls: the effects of the omitted variables are presumed to have the same effect constantly over time. Moreover, there are time-varying but unit-consistent variables (e.g., macroeconomy). Nationwide policies are time-sensitive that may change over time but have the same effect on each unit (village). Since both types of factors may affect the policy delivery, it becomes harder to attribute the causal effect to electoral competitiveness.

A FE model has constant slopes but different intercepts depending on year and village. Besides, standard errors have to be "clustered" by panel unit (e.g., village) to allow correlation in the μ_{it} for the same i. The combination of time-series with cross-sectional data endows a

two-way panel design with an extra layer of inferential power, which would not be possible if only one of these two dimensions is included (Gujarati, 2003).[15] A panel design controls for omitted and unmeasurable variables in the data and allows for a greater capacity for interpreting complex human behaviors (Hsiao, 2007).

We will run the panel analysis from different time periods to identify the dynamic effects of electoral competitiveness. The analysis adopts an empirical approach: first, it sets up a cutoff year (1995) and then examines how elections perform in the early stage (1986-1994) compared to the later stage (since 1995) by comparing the direction and size of regression coefficients.

Dataset

This chapter adopts the Village Democracy Survey (VDS) dataset as in the previous chapter. It is a retrospective dataset of the National Fixed-Point Survey (NFPS) conducted by the Chinese Ministry of Agriculture. VDS collects nationwide representative samples from 1986 to 2005 and includes a few trial cases before 1986. Chapter 2 contains the complete information about the sampling strategy and the dataset.

To analyze the dynamic time effect of electoral competitiveness, we pick 1995 as the cutoff year and divide the dataset into two parts: Stage 1 (1986 to 1994) and Stage 2 (since 1995). 1995 is an appropriate cutoff year because the OLVC required all villages to conduct the electoral procedures competitively. We filter out cases with incomplete information and

[15] Gujarati, D. (2003). Basic Econometrics. 4th ed. New York: McGraw Hill, pp. 638-640.

analyze cases with two or more rounds of elections held from 1986 to 1994. In total, there are 20 villages in the initial stage and 92 villages in the mature stage.[16]

Dependent Variable

In the 1970s and 1980s, village leaders were obligated with four types of responsibilities: collecting taxations and fees, implementing family planning, fulfilling grain procurement quotas, and providing public goods and services (Lin et al., 2003). Before the introduction of village elections, township and high-level governments focus on the first three areas but not the last one while evaluating cadres' performance. Due to the lack of public supervision, local officials rarely consider economic redistribution plans or wealth transfer that benefits local villagers in the old days (Bernstein and Lv, 2000). However, the incentive program changed drastically after the introduction of elections as the locals' interests came into the equation: they could vote out lacking performers. As a result, appointed and elected local cadres face drastically different types of incentives: the appointed ones are more incentivized to carry out all but the last duty, and the elected officials have additional incentives to invest in the provision of public goods and serve local constituencies.

This chapter picks the last category – the amount of public investment – rather than the other three as the dependent variable (DV) for two reasons. First, only the last category is directly responsible to the villagers, i.e., public accountability, while the other three are being

[16] I do not have access to the village-level data and cannot decide if there is any bias. However, the data representativeness should not be an issue since we are using a panel design with fixed effects.

accountable to the upper government.[17] Second, it is more likely to observe variations in the monetary term if there is a behavioral shift caused by the incentive changes. VDS contains several types of social projects, including education, roads, irrigation and drainage systems, electricity, and forest conservancy. To operationalize, we aggregate the individual amount of investment in each subcategory to construct the DV.

Independent Variable

We follow Kennedy (2002) and link electoral competition to outcome uncertainty. First, the electoral outcome remains unmodified *ex ante* or *ex post facto*. For an election to be legitimate, no one can pre-decide the election result before it occurs or modify it afterward. If an election excludes any restrictions that eliminate competition, the first condition is fulfilled. Second, all election participants should subject their preferences to open competition and uncertainty (Kennedy, 2002). If a small group of insiders generates the candidate slate, not all interests face competition and uncertainty. Instead, open nomination, *cha'e*, and participant villagers ensure the electoral uncertainty. The second principle is built upon the first. In other words, it won't be possible to call an election competitive if a stakeholder can modify the results and still subject their interests to public competition.

[17] As noted, Chapter 3 and Chapter 4 answer different research questions by focusing on different outcomes of accountable institutions. The previous chapter examines the immediate policy changes after the election and so adopts family planning as the policy outcome, which is a one-time analysis at the cutoff point. In contrast, this chapter tries to understand how institutions evolve over time and adopts a longitudinal scope of analysis. Treating Family Planning as the DV for this chapter poses severe measurement challenges.

We construct three levels of electoral competitiveness according to these two principles. If both conditions are met, we call it a highly competitive election with a high degree of uncertainty. That is, no one manipulates the electoral outcome beforehand, and participants express their interests publicly and face uncertainties. To operationalize, we categorize it as a competitive election if it allows public nomination and conducts in a *cha'e* manner with a high voter turnout.

If only the first condition met but not the second, then we categorize it as a semi-competitive election with a medium level of uncertainty. Typically, this type of semi-competitive election shares the following traits: open nomination is allowed, but the Party remains a tighter control and weighs heavily in influencing the outcome *vis-a-vis* the public.

If both conditions remain unmet, we call it a non-competitive election with a low level of uncertainty, and the election is conducted in a top-down manner with no popular input. In this type of election, the winner is pre-determined (condition 1), and not all interests are subjected to competition and uncertainty (condition 2).

There is a positive relationship between electoral competitiveness and outcome uncertainty: the most competitive elections have the highest level of uncertainty, the non-competitive elections bring in the lowest level, and the semi-competitive ones in the middle.

To operationalize it, if the candidate is nominated publicly, we code it 1; otherwise, 0. If the election is conducted in a *cha'e* manner, we code it 1; otherwise, 0. If the voter turnout is at or above 90%, we code it 1; otherwise, 0. Then, we add all three categorical variables together and obtain a Composite Competitiveness Index (CCI) ranging from 0 to 3. If only one or no condition is met, we categorize it as a non-competitive election; if two conditions are met, we

call it a semi-competitive election; if all three conditions are met, we call it a competitive election.

This chapter arbitrarily sets the 90% voting turnout as the cutoff for the justification that the average voting turnout is slightly above 88%, as shown in Figures 4.1 and 4.2.

Figure 4.1: Voting Turnout in Phase 1 (1986 - 1994)

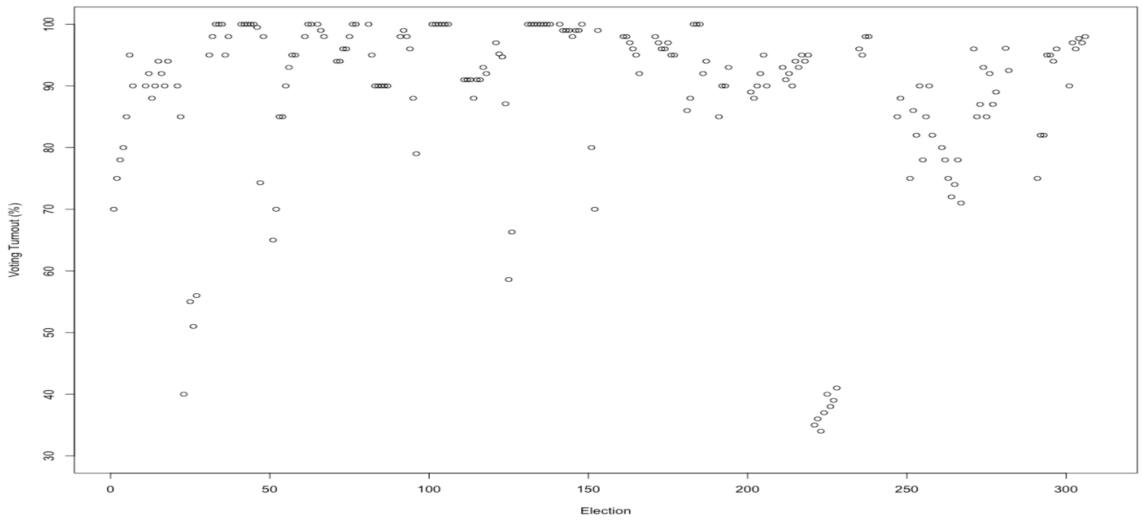
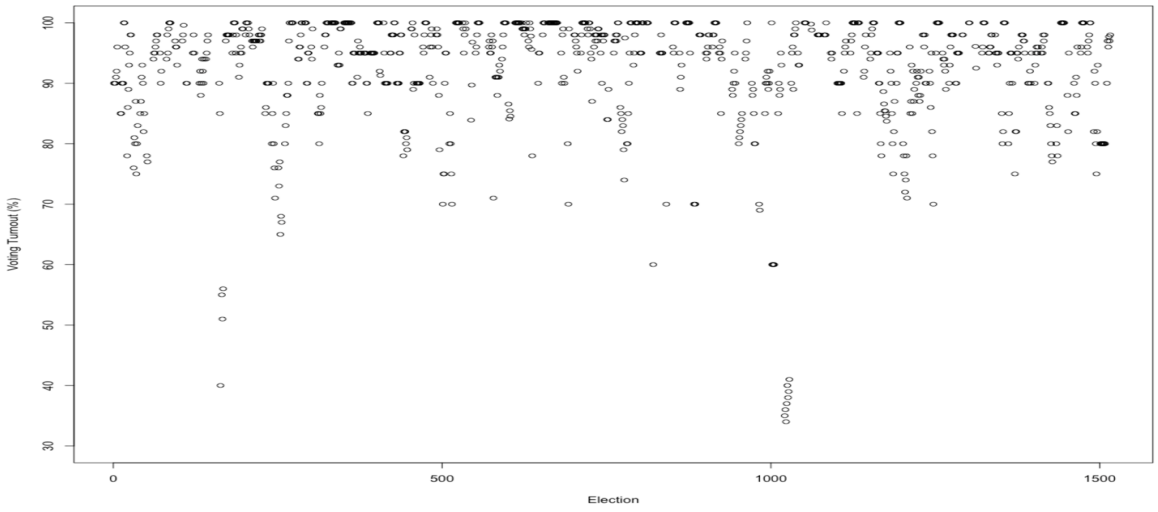


Figure 4.2 Voting Turnout in Phase 2 (Since 1995)



As noted, the central government did not officially put out any regulations and punitive articles nor in its intention to enforce coercive voting. In the data collection process, the authors of the VDS did not document any form of voting violation and coercion. The high turnout baseline can result from social mobilization and how it conducts in practice. Unlike the western elections, Chinese elections are conducted in a social gathering way. On the election day, all villagers gather together and cast their votes when their names are called upon. An election is considered a high-stake village affair, and locals rarely opt out.[18] Moreover, candidates reach out to their kinship and social network for support. As a result, the voting turnout usually stands high. Certainly, there is a wide range of variation in the turnout as low as 34%.

Table 4.1 Chi-Square Tests of Three Components in Phase 1

Phase 1: 1986 - 1994			
	Component 1: *cha'e*	**Component 2**: Nomination Channel	**Component 3**: High Turnout
Component 1: *cha'e*	1	0.4667	0.954
Component 2: Nomination Channel	0.4667	1	0.3512
Component 3: High Turnout	0.954	0.3512	1

[18] Chapter 5 further explains the working mechanism of the lineage-based social groups in enforcing local accountability.

Table 4.1 presents the chi-square tests among the three constituting components in phase 1. All three chi-square tests return large p-values, indicating inter-independence among these three components.

Table 4.2 Chi-Square Tests of Three Components in Phase 2

Phase 2: since 1995			
	Component 1: *cha'e*	**Component 2**: Nomination Channel	**Component 3**: High Turnout
Component 1: *cha'e*	1	2.2e-16***	0.5985
Component 2: Nomination Channel	2.2e-16***	1	1.92e-08***
Component 3: High Turnout	0.5985	1.92e-08***	1

Notes: *** indicates significance at 0.001 level.

Table 4.2 contains the chi-square tests of the components in phase 2. Two of three tests return significant results, suggesting two sets of dependence. First, component 1 (*cha'e*) and component 2 (nomination channel) are highly dependent at 0.001 level. Second, component 2 and component 3 (turnout) are also statistically significant at 0.001 level. As noted, these components are independent in stage 1 but become dependent in stage 2. They send a strong signal that villagers become increasingly familiar with the voting procedures and show more enthusiasm in the electoral process.

Table 4.3 contains the Cronbach coefficient's alpha of these three components. Similar to the previous finding, stage 1 data shows a weaker consistency than stage 2 data. To be fair, both stages of data show a low internal consistency according to the standard rule. Notwithstanding the low consistency of the index, the coefficient exhibits growing consistency. In Phase 1, the coefficient mere stands above 0, and its 95% confidence interval contains 0. However, the coefficient increases to 0.327, and the confidence interval excludes 0. The coefficients in Phase 1 and Phase 2 show an increasing consistent pattern over time.

There are several possible reasons for the low consistency of the multi-prong index. First, setting the cutoff at 90% is arbitrary and may introduce potential biases. Both Figures 4.1 and 4.2 show a highly concentrated pattern among the data above the cutoff and sparse data distribution among the data below the cutoff. The data distribution renders the current operationalization less reliable. Second, villagers respond differently to the electoral components — *cha'e,* nomination channel, and high turnout — as those included in the index. Presumably, villagers should be most sensitive to the first two components and less so towards the third. Instead of treating these components equally, we should assign different weights to each component and construct a weighted index. Unfortunately, I pulled data from multiple sources while constructing the index variable. To make it easier to compile, I only computed the total value for the index without retaining the original components. Due to time constraints, I was not able to reconstruct the data sets and re-conduct the data analysis using alternative ways of variable construction. Third, our model assumption is villagers have sufficient institutional knowledge and political sophistication to make an effort to grasp the relationship between the policy input and output. However, it is still too early to expect

villagers to understand the importance of high turnout and why it would impact the policy output within the existing political institutionalization in rural China. In addition, we can select a few villages and conduct case studies to verify the underlying working mechanism between the electoral process and policy output.

Table 4.3 Cronbach's Alpha of Different Components

	Cronbach's Alpha	**Bootstrap 95% Confidence Interval**
Phase 1	0.122	[-0.105, 0.306][19]
Phase 2	0.327	[0.239, 0.401]

6. Empirical Results and Discussions

In this section, we present the empirical analysis and main findings. In R, we import the *plm* package and turn the raw panel data into a software readable format. In Phase 1, there are 20 unique villages and 56 rows of observations, which is an unbalanced panel design.

Table 4.4 Descriptive Data of Independent Variable in Stages 1 and 2

	IV: Electoral Competitiveness (CCI)			
	Non-Competitive		**Semi-Competitive**	**Competitive**
	0	**1**	**2**	**3**
Stage 1	7 (3.5%)	36 (18%)	83 (41.5%)	74 (37%)
Stage 2	0	13 (4.9%)	73 (27.5%)	179 (67.5%)

[19] The main reason why the left bound is negative is because of the small sample size and small number of items. While the true population covariance is positive, sampling error generates a negative average covariance, which leads to the negative coefficient.

Table 4.4 contains descriptive data of the IV. In Stage 1, less than 5% of elections were non-competitive, and most elections were either semi-competitive or competitive. In Stage 2, there was a clear pattern shift as more elections (67.5%) were held in a competitive manner.

Table 4.5 Descriptive Data of Electoral Competitiveness in Stages 1 and 2

	Component 1: Source of Nomination		**Component 2*: Cha'e***		**Component 3:** Voting Turnout	
	Stage 1	**Stage 2**	**Stage 1**	**Stage 2**	**Stage 1**	**Stage 2**
0	76 (36%)	247 (27%)	49 (23%)	195 (21%)	61 (30%)	225 (25%)
1	134 (64%)	665 (73%)	162 (77%)	717 (79%)	140 (70%)	670 (75%)

Table 4.5 presents descriptive data of the three constituting components of electoral competitiveness in Stages 1 and 2. Except for the last component (voting turnout dummy variable), the other two dummy variables have a clear shifting pattern as more elections adopt open nomination and *cha'e* (more candidates running for each office), indicating an increased level of election competition.

Appendix Table 4.1 Descriptive Data of Public Investment (in ten thousand RMB) in Stage 1 (*See the appendix*)

Appendix Table 4.2 Descriptive Data of Public Investment (in ten thousand RMB) in Stage 2 (*See the appendix*)

Appendix Tables 4.1 and 4.2 contain descriptive information about the DV in Stages 1 and 2, respectively. As noted above, a few villages that have data observations dated back to 1983, when the election was initially introduced. We fit a two-way FE model (village and year) on data from both stages in the panel analysis part. Table 4.6 contains the result. As it turns out, the electoral competitiveness has a negative coefficient (-36.461) but is not statistically

significant in the stage 1 data: the p-value is 0.3725. In contrast, the competitiveness turns positive in stage 2. Again, its p-value is 0.1468, and we fail to reject the null hypothesis.

There are two things worth noting: the coefficient turns positive from negative, and the p-value decreases drastically from 0.3725 to 0.1468. They are positive signals that elections may be taking root, but it is still too early to identify any causal relationships. Therefore, the empirical evidence does not support any relationship between electoral competitiveness and policy provisions in the initial and mature periods.

Table 4.6 Panel Analysis of the Public Investment

	DV: The Amount of Public Investment Funded by Villagers	
	Stage 1	**Stage 2**
Electoral Competitiveness	- 36.461	16.072
	n = 20, T = 2-4, N= 56	n = 92, T = 1-5 , N = 256
Note: n is the number of villages, T is the number of years, and N is the number of observations		

7. Research Limitations and Future Work

Our research design is largely appropriate and has addressed the potential technical problems. The biggest limitation comes from the missing data. As noted, this is an unbalanced design with missing values. There could be confounding factors that explain the missingness, which is not possible to confirm in this study alone. One solution is to conduct follow-up studies and check if any consistent pattern exists.

8. Conclusion

As this chapter argues, institutions take time and prerequisites to take root and work as expected. In several branches of Comparative Politics, we have observed how political institutions evolve and exert time-dynamic influences over time. Holding elections can boost villagers' subjective evaluation of the process and encourage more mass participation. Based on their household income, they become more aware of the electoral process and develop a sense of citizenship, which in return raises public supervision that holds local cadres accountable.

In the existing literature, scholars have consistently observed that direct elections cause accountable behavioral changes regardless of the regime type and competitive elections lead to better policy provisions in China. This chapter proposes a new multi-prong definition of electoral competitiveness that examines the electoral process and public participation and checks its effects on policy provision in two stages. However, the empirical results do not support the hypotheses. It may take several decades for political institutions to settle down in a transitional society like China's, and the current research scope is not long enough. It requires more intentional effort to differentiate the competitive elections from the non-competitive ones.

Another possible explanation is because of the measurement. Chapter 4 defines and measures the electoral competitiveness from three aspects. The multi-prong operationalization introduces more variability into the measurement, and the binary coding strategy may not be sufficient. Also, these three aspects may carry different weights in the composite index, but we assign equal weights in the analysis.

Appendix The Panel study has four assumptions.

1. *Linearity*: $y_{it} = \alpha + X_{it}'\beta + \mu_i + v_{it}$, where $E[v_{it}] = 0$ and $E[\mu_i] = 0$. The parameters are linearly related to the dependent variable.
2. *Independence*. The observations are independent across individual villages but unnecessarily across time.
3. *Strict exogeneity*: $E[v_{it}|X_{it}', \mu_i] = 0$. The idiosyncratic error term v_{it} of village and year is uncorrelated with the independent variables at any time in the analysis of the same individual.
4. Constant error variance: $Var[v_{it}|X_{it}', \mu_i] = \sigma^2\mathbf{I}$.

Appendix Table 4.1 Descriptive Data of Public Investment (in ten thousand RMB) in Stage 1

Year	MIN	MAX	Mean
1983	8	8	8
1984	7	15	10
1985	60	60	60
1986	0.5	300	49
1987	4	18	11
1988	9	40	19.8
1989	2	100	28.5
1990	2	21	11
1991	7	200	67.8
1992	4	500	143.5
1993	3	27	10.5
1994	2	15	7.75

Appendix Table 4.2 Descriptive Data of Public Investment (in ten thousand RMB) in Stage 2

Year	Min	Max	Mean
1995	2.5	50	16
1996	0.5	253	24
1997	2	102	21
1998	1	31.55	12
1999	0.5	280	30
2000	2	180	25
2001	0.5	280	24
2002	1	204	46
2003	1.5	70	26
2004	0.2	134.6	35
2005	1	580	57
2006	1.1	436	95

Chapter 5

The Evolving Interactions Between Formal and Informal Accountability

5.1 **Introduction**

In weakly institutionalized localities, what enforcing mechanisms hold local officials accountable? What roles do formal and informal channels of government accountability play, respectively? How do they interact and evolve in the long run? The existing literature has adopted a statical approach to these questions with a fixed time horizon in mind and inspected each channel's functionality separately. Regrettably, not enough academic effort has been made to combine these two avenues with a longitudinal perspective, particularly in developing countries.

To deliver good governance, institutional theorists advocate for democratic institutions and power decentralization to local citizens (Dahl, 1971; O'Donnell, 1996). However, a common problem that developing countries often face is the absence of procedural institutions and bureaucratic accountability (Bardhan, 2002). The lack of formal accountability presents a moral hazard problem between political principals and agents. For example, there is no way to ensure the sufficient provision of social programming without electoral accountability, as argued in Chapter 3. In addition, it depends on individual power holders to act and serve on behalf of the constituencies' best interests instead of their own.

Given the absence of procedural accountability, researchers seek help from the informal channels for viable alternatives but find mixed evidence at best.[20] On the one hand, any

[20] For a review of informal institutions, see Helmke and Levitsky (2004), "Informal Institutions and Comparative Politics: A Research Agenda."

informal social network is built upon personal connections and closed to the general public. Inevitably, it fosters a sense of trust in those who are inside the network and distrust or mistrust of those who are outside (Levi, 1996; Xiao, 2001). Without effective supervision, it breeds corruption, violation of rules, misconduct, abuse of power, clientelism, and other illegal activities (Böröcz, 2000; Collins, 2003; O'Donnell, 1994 & 1996).

On the other hand, cultural scholars find that values, norms, social lineage, unofficial rules, and moral standing play equivalently important roles in a society when formal accountability is weak (Putnam, 1993 & 2000; Tsai, 2007). For example, local gentry groups served as a tie between the imperial ruler and villagers and maintained societal cohesion and stability in ancient China (Fei, 1946).

There are two caveats. First, the mixed findings may suggest Heterogeneous Treatment Effects (HTE) as there are a wide range of social lineage groups or Time-Varying Treatment Effects (TVTE) as institutions go through multiple stages of development over time. To control for HTE, this chapter narrows down its discussion scope and focuses only on the village lineage social groups. Unfortunately, the extant literature has not examined the TVTE of political institutions specifically in the Chinese context: informal networks kick in when the formal institutions are still fledging in the early days and may withdraw after political institutions establish the ground in later years. Therefore, we pay special attention to the time horizon in the following data analysis.

Second, the mixed results do not negate the fact that informal networks can work in tandem with the formal channel. They are not mutually exclusive and can coexist, especially in a transitional society. For instance, strong community norms and formal rules work together to deliver good governance in irrigation policy in Taiwan (Lam, 1997).

As discussed in Chapter 4, the Chinese state has adopted a decentralized model when it comes to basic public goods provision. It is local officials' responsibility to fund and organize public services without outside help (Brandt and Turner, 2007; Lin et al., 2003; Rozelle, 1994; O'Brien, 1994; Oi and Rozelle, 2000; Tsai, 2007; Whiting, 1996; Wong, 1997). In addition, it is illegal to levy taxes to fund public projects, and the only viable option left is to ask for voluntary monetary contributions from villagers. To secure enough funding, local leadership needs to overcome the apparent collective action problem: whether a villager contributes to the group project (e.g., road) or not, he or she can still benefit from the work of others, a typical setup for free riders. It is impossible to provide sufficient public projects if the free-rider problem happens on a large scale, which is why so many Chinese villages are underfunded with social projects (Luo et al., 2007 & 2010). This is the moment when social lineage groups weigh in and solve the collective action problem in securing public funding.

Local officials need to utilize their social and professional networks to overcome the apparent collective action dilemma. In this sense, we define government accountability as the officials' attempt to raise enough funding for social projects, measured by the voluntary donation from villagers. The measurement is appropriate because the self-funding donation is the only viable option to fund social projects. Accountable local leaders would make more efforts to carry out their duties, solve the collective action problem, and raise more funding.[21]

This chapter proceeds as follows. First, it introduces the key players in Chinese village politics and shows how they contribute to the decision-making processes at the local level. Second, it explains how informal networks can help local officials solve the collective action

[21] Section 5.3 contains more information on how local officials overcome the problem.

problem, specifically in securing financial support for social programs. Third, it discusses the long-term interactions between the formal and informal channels of government accountability and proposes testable hypotheses. In the empirical part, it presents the data source, variable selection, measurement, research design, data analysis, and main findings. Finally, it concludes with research limitations and further directions.

5.2 **The Power Structure of Village Politics**

First off, we follow Oi and Rozelle (2000) and define power as the ability to mobilize public resources, which is critical for understanding the power struggle in village politics. There are four critical players in Chinese rural politics: township government, village party branch, elected village committee members, and social lineage groups. The abrupt introduction of electoral reform in the early 1980s disrupted the power equilibrium among these players, but the existing power structure may stay intact in the initial years. As a result, it may take multiple years to build up the momentum to change the power distribution.

In the remainder of this section, we examine how key village stakeholders interact and draw out the political landscape of Chinese rural politics. It is crucial to understand how various political actors behave and interact with each other. As O'Brien and Han (2009) put it, it largely depends on the power configuration in which the elected VCs are embedded that determine if they can exercise power. In many cases, the old power structure constituting township influence, appointed party secretaries, and social groups put constraints on democratic rules (O'Brien and Han, 2009). The following discussion helps us better understand how the power equilibrium shifts after the introduction of village elections, which lays the foundation for justifying the time-varying effects of political institutions.

Township Government

First, town and upper governments weigh heavily in rural politics.[22] As discussed in other chapters, there were severe governing crises in the post-Mao era in China, and the central government treated direct local elections as the instrument of good governance (Shi, 1999). In the initial institutional design phase, the goal of holding elections was never about bottom-up democratization; instead, the intention was to mitigate the cadre-locals tension and maintain regime stability.

As Alpermann (2001) puts it, the Chinese state adopts the self-governance as a way of dominating rural politics. They achieve the goal by carrying out the carrot-and-stick tactic. For example, villages cannot afford inter-village social programs like building a road connecting two villages and need fiscal support from the town and upper governments.[23] If they do not comply with the upper leadership, local leaders are unlikely to get preferential fiscal treatments (O'Brien and Han, 2009). In contrast, if they show unconditional compliance and loyalty, the Chinese cadre management system rewards them with monetary bonuses and promotions (O'Brien and Han, 2009). In addition to the tight control, local leaders are under direct township supervision and have limited room for self-determination when it comes to the implementation of state-mandated programs (*guoce*) like the Family Planning Policy (FPP).

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[22] Township governments have direct influence over decision making at the village level. However, any higher levels of governments can intervene local affairs indirectly though the township governments.

[23] China has the following three-level administrative scheme: province (or its equivalence) – county (or its equivalence) – town (or its equivalence).

Therefore, some China observers believe that the self-governance pushes local leaders in the interests of the state rather than of the electorate (Alpermann, 2001). To a large extent, it serves as a supplement rather than a substitute for state control and solves the principal-agent relationship between the state and village cadres, rather than the one between villagers and village leaders (Alpermann, 2001). Furthermore, the election merely provides an additional channel of mass participation but has not changed the direction of policy implementation or the way how rural governance works; namely, it increases the "access to power" but not the "exercise of power" (O'Brien and Han, 2009).

However, these authors adopt a fixed mindset and fail to recognize the time-varying nature of formal institutions: citizens are going to invest more in the process as the institutions become more embedded and established. As shown in chapter 3, direct elections have changed local leaders' incentives and behaviors in a way more favorable to villagers while carrying out the strictly enforced state-mandated policy like the FPP. If contextual conditions become available, it is reasonable to expect the diminishing influence of township government as formal elections take root in the long term. Therefore, we need to control for the interference from the township government in our formal model.

Local Party Secretaries and Elected Village Committees

Second, appointed party secretaries and elected village committee members put up a tug of war in local politics. The former is appointed by the upper government and acts as an agent of the state; the latter is directly elected by the public and pays close attention to villagers' needs (Guo and Bernstein, 2004; He, 2007, pp. 109 - 111).

While implementing the electoral reform, the OLVC states that the local party secretary should be the leadership core (*lingdao hexin*) in dealing with local affairs. Officially, the party

branch is in a pre-eminent position *vis-à-vis* an elected VC. However, the law fails to draw a clear-cut boundary between these two players. So, they are often in conflict over major collective economic enterprises. When the confrontation happens, township governments are more likely to side with the local party branch (Oi and Rozelle, 2000; Guo and Bernstein, 2004). As seen, the dual existence of appointed party secretary and elected village committee members limits the effects of local elections. The former is often considered more influential, at least in the early days (Oi and Rozelle, 2000).

It is true that the party secretary has a pre-eminent advantage over the elected VC, but the relative strength is fluid and dynamic: it keeps changing as the election, as a political institution, takes root and grants more credibility for the elected officials. Unfortunately, these authors fail to take the time dimension into consideration. For example, scholars have observed a few cases with the transition of power from party secretaries to elected officials, including handing over the village account books and the official seals (Guo and Bernstein, 2004). These transition stories further support the hypothesis of the time-varying effects of political institutions. In the model building process, we will introduce a variable that measures the relative strength of local party branches vis-à-vis elected officials.

Social Lineage Groups

Last, informal social networks play a critical role in Chinese village politics (Manion, 2006; Tsai, 2002 & 2007; Xu and Yao, 2015). In areas that lack formal accountability, the community-based social norms and rules maintain societal coherency and hold local leaders accountable (Tsai, 2002 & 2007). In the following two sections (5.3 and 5.4), we elaborate on the causal working mechanism of how informal networks affect policy provision.

5.3 **Informal Network, Collective Action Problem, and Policy Provision**

In this section, we illustrate how informal institutions, specifically village lineage groups, affect local policy provision. Informal institutions are defined as the set of rules and norms that are created and maintained by locals (Helmke and Levitsky, 2004).

In the Chinese context, the kinship-based lineage group is the most important form of social network (Fei, 1946; Freedman, 1958). Especially in rural areas, clan members live in close proximity and follow the same societal norms. They pay respect to the same ancestors and offer sacrifices on important dates. They share life stories and gossip about who fails to meet societal expectations. These types of group activities provide opportunities for clan members to interact and reinforce the group identity (Freedman 1967; Tsai, 2007).

Chinese rural societies normalize loyalties by kinship and expect reciprocity (Madsen, 1984). There is a strong sense of social obligation that clan members should look after each other; failing to do so faces severe consequences, including social distancing, sanctioning, downgrading moral standing in the community, or even casting away from the clan. As a result, this type of social mechanism secures compliance and fosters a high level of social trust among the lineage members.

In the 1980s and 1990s, most villages were geographically isolated from the outside world and relied on community elders to hold justice and mitigate conflicts. If they believe local officials are trustworthy and the proposed social project is beneficial for villagers' life, the clan elders hold council meetings and convince family members to donate working hours or money to the project on a voluntary basis (Xu and Yao, 2015).[24]

[24] This is consistent with my personal experience with financing group projects.

Besides, another effective way of encouraging voluntary donation is to carve out the donors and the amount of their contribution in a memorial tablet and display it in a prominent location, such as lineage temple (*citang*); whoever shirks their fair share of obligation would face criticism and social pressure.[25] Therefore, scholars tend to agree that the informal lineage networks overcome barricades to collective action via persuasion and social sanctioning (Tsai, 2007; Xiao, 2001; Xu and Yao, 2015). Furthermore, the solidary groups need to equip with two characteristics: encompassing and embedding. That is, they are open to every community member and have overlapping boundaries between social and political spheres (i.e., encompassing). These social institutions incorporate local cadres as members (i.e., embedding) (Tsai, 2007). Solidary groups with these two characteristics include village temples and village-wide lineage groups. If the lineage groups are not encompassing or embedding, then they cannot hold local officials accountable (e.g., village churches).

In a recent study, Xu and Yao (2015) try to empirically test if the lineage groups overcome the collective action problem via persuasion and social sanctioning and also hold the officials more accountable. Unfortunately, they only find evidence supporting the collective action argument but no convincing evidence supporting the accountability claim. However, they treat the amount of administrative fee (*xingzhengfei*) collected from the villagers as the

[25] This is also in consistency with my personal experience living in a village, and Chinese villagers value community identity and their group image. Shirking fair share of group obligations brings shame to the family.

measurement of public accountability, which is circumstantial evidence at best. Being accountable does not necessarily mean a decrease in the administrative fee.[26]

5.4 **How Social Lineage Groups Interact with Elections**

So far, we have shown how both the formal and informal channels can lead to government accountability. In this section, we shift gears to the long-term interactions between these two channels and explain how they work together and lead to the congruence between local leaders and villagers (Manion, 1996 & 2006; Tsai, 2002 & 2007).

China observers have examined how the informal channel interacts with the electoral process from different perspectives. For example, Kennedy (2002) finds that the number of clans has a linear effect on villager satisfaction with the electoral process: the level of public satisfaction is the highest in single-surname villages and the lowest in villages with two or three large lineage groups. This is so because the introduction of the election exacerbated the existing rivalries between clans. In a similar manner, Xiao (2001) finds village elections moderate conflicts within clans but intensify inter-clan rivalries. Furthermore, the candidates from big clans are more likely to win the election (Xiao, 2001).

Other researchers look at the policy output and spot a strong flavor of "community governance" in rural China (Luo et al., 2007). That is, there is a high level of community participation. In specific, local leaders need the consent and support of the traditional village authorities to collect taxes and implement other types of public policies (Li, 2003; Li and

[26] Administrative fee is normally collected from villagers to support business expenditure of local officials, such as transportation, food, lodging, etc. It is at the cadres' discretion to set the amount. Due to the lack of supervision, cadres often misuse the fee for personal use.

O'Brien, 1999; O'Brien, 1994; O'Brien and Shi, 1999; Tsai, 2007a, 2007b; Wang, 1997). For example, using a randomly collected dataset, Luo et al. (2010) emphasize that village democracy works like pork-barrel politics as whoever allocates more public projects is more likely to be re-elected. However, this argument is problematic as the authors fail to recognize the funding source is from locals, not from the upper government. It does not make any sense to call it pork-barrel politics if villagers self-fund social projects. As one of a few, Manion (1996) looks at multiple sources of influence and correctly concludes that the policy congruence between village leaders and their electorates is a result of formal (*via* election) and informal channels (*via* socialization and influence). Besides, the underlying causal mechanism resembles rational voter choice (Manion, 1997).

5.5 **Section Summary**

Given the interferences from these governmental (township and local party branches) and societal forces (social lineage groups), some China observers conclude that direct elections have not fundamentally changed the power distribution in Chinese politics (O'Brien and Han, 2009; Oi and Rozelle, 2000). Well, the null finding does not mean the power distribution would stay constant throughout the reform era, nor that the elected officials would be in a less advantaged position forever. As noted, the OLVC was implemented on a trial basis in 1988 and was not fully carried out to all villages until 1998. These studies come out just a few years after the nationwide implementation, which may be too early to present the full picture. The null finding may hide time-sensitive effects.

5.6 **Empirical Analysis**

As argued throughout this dissertation, it takes time and requires extensive environmental conditions for a new political institution to settle down and work as expected. Before the right

contextual conditions, political institutions will not lead to any substantial policy outputs. This chapter hypothesizes a substitutive relationship between formal and informal channels of accountability in the formative phase but a co-existent relationship in later years. Using an unbalanced panel design, it incorporates a longitudinal perspective and analyzes the time-dynamic interactions between the formal and informal channels in two stages of development.

Hypothesis 5.3: In the weakly institutionalized environment, informal avenues weigh more influence in delivering government accountability before elections become institutionalized, and formal accountability takes over after becoming institutionalized.

5.6.1 **Method**

This chapter adopts a panel design with two-way fixed effects (FE) at the village and year levels. Panel study serves as its own control and compares the level of villager-funded public provisions during the terms of local leaders with a strong informal network and the terms without the informal support within each village. The FE model controls for time-invariant heterogeneity and only looks at the within-village changes of public goods expenditure due to within-village changes of informal institutions associated with village leaders, greatly alleviating the concern of omitted variables (Xu and Yao, 2015). For full disclosure, VDS does not contain the full set of social and economic variables of all villages, and other researchers rely on the National Fixed-Point Survey (NFPS) for supplementary information (Martinez-Bravo et al., 2011 & 2017; Xu and Yao, 2015).[27] Therefore, the two-way FE panel design is appropriate.

[27] Chapter 3 and 4 contain more information about the VDS and NFPS datasets, and I do not have access to the NFPS dataset.

The village FE model controls for all time-invariant differences between villages but stays the same within the village, e.g., distance to a city, and the year FE model controls for all changes over time that affect regions similarly, e.g., nationwide policy changes. For the mathematical expression and other related information about the FE panel design, please refer to the method section in Chapter 4.

5.6.2 Data and Variables

Dataset

As in the remainder of the dissertation, Chapter 5 adopts the Village Democracy Survey (VDS) dataset. VDS is a retrospective dataset of the National Fixed-Point Survey (*guojia dingdian diaocha*) conducted by the Chinese Ministry of Agriculture. It adopts a representative sampling strategy and collects a nationwide representative sample from 1986 to 2005 annually. It has a sample size of more than 200 villages and includes a few trial cases before 1986.[28]

As described in Chapter 4, scholars often choose 1995 as the cutoff year and divide the VDS dataset into two parts: Stage 1 (1986-1994) and Stage 2 (since 1995). The main justification is that the MoCA formalized the legal procedures and required all village elections to be held in a competitive way (Martinez-Bravo et al., 2011 & 2017). Chapter 5 follows the same practice and divides the VDS into two parts at the cutoff year 1995.

Dependent Variable

The village governments do not have the legal authority to tax people for social provisions, and they can only collect a small number of fees and levies on special occasions, which is insufficient for funding large-scale social projects (Oi and Rozelle, 2000). As elaborated above

[28] Chapter 3 has more information about the sampling strategy and the VDS.

and in other chapters, the only viable source of funding source is to ask for voluntary donations from villagers. Therefore, we treat the monetary amount of public investment self-funded by villagers spent each year of each village (in log form) as the dependent variable (DV).

With reference to the definition of power, we interpret the DV in a monotonically increasing way: if the DV has a bigger value, the village government is more powerful in mobilizing villagers. The reason why we take the log form is to reduce the data scale and make it more comparable. If the investment amount is zero, we artificially add $1 to the DV to ensure the model runs.[29]

Independent Variables

To test the above hypothesis, this chapter tries to examine two sets of independent variables (IV). First, we create a dichotomy variable to indicate if the VC is from one of the two largest clans. The VDS contains information about the largest family names in villages. If an elected VC shares the same family name, we code it 1 and 0 otherwise. It is a viable indicator of the level of informal power that the elected VCs receive, a common way of measuring the level of informal power in local politics. The existing literature supports the informal network argument (Xiao, 2001; Xu and Yao, 2015). That is, if the VCs are from the largest clans, then they can overcome the collective action problem identified above and receive more support from the village elders; otherwise, they are unlikely to receive the equivalent amount of support.

Second, we measure the level of power institutionalization by comparing the number of signature rights that the Village Chiefs and Party Secretaries (PS) have in a village per year. In

[29] Mathematically, taking the log form of zero is not defined, and the model steps running for such cases.

total, there are five major village affairs, including the right to appoint village enterprise managers, the right to appoint villages executives, the right to decide the everyday budget, the right to allocate and modify flexible land (*jidongdi*),[30] and the right to decide major investments.

For each signature right, there are three options: only VC's signature, or PS's signature, or both parties' signatures are needed. If only the PS' signature is needed, we code it 0, meaning VC is in a less preferable position vis-à-vis PS. If both parties' signatures are needed, we code it 1, meaning VC and PS are in a relatively comparable situation. If only VC's signature is needed, we code it 2, meaning VC is in a stronger position compared to the PS's, sending a positive signal that the electoral process is being established. We create a Power Strength Index (PSI) by summing up the numerical value in each signature right category. The index ranges from 0 to 10 and indicates a positive linear relationship between the VC's power and the level of institutionalization. The higher the index, the more established the formal election is. Due to missing data in stage 1, we only select four signature rights, and the PSI ranges from 0 to 8. In stage 2, PSI ranges from 0 to 10.

As discussed in Section 5.2, VCs and PS are in frequent conflict due to the ambiguous specifications of the OLVC. For example, Article three states that the local party branch should

[30] In Chinese rural areas, villages reserved a small amount of flexible land (usually, no more than 5% of the total arable land) to adjust land allocation and accommodate newly emerged population. However, it was abolished in 2003 after the implementation of Law of the People's Republic of China on Land Contract in Rural Areas. What to do with the data before and after 2003.

be in the leadership core (*lindao hexin*), but Article two says that VC handles public affairs and social welfare in a village. This chapter argues that if an entity has more signature rights over the village affairs, then this entity is more influential and powerful. The more signature rights that VC has, the better the election has been institutionalized.

Control Variable

We want to control for the governmental support received from the town and upper governments. As described above, the upper governments use fiscal policy as an incentive for compliance and loyalty. If a village indeed receives some form of support from the upper governments, it means this village maintains a positive relationship with the upper government. The control variable should be independent of the independent variable (PSI) because it is not up to the township government to stipulate the number of signature rights. It largely depends on the power struggle between VC and PS at the local level (Guo and Bernstein, 2004). For example, one VC in *Fengtai* village demanded immediate control over the village economic affairs after the election, and also over half of the VC committee members signed a written objection to the township authority to rescind its order of only accepting the signature of the Party Secretary's (Guo and Bernstein, 2004). This observation receives empirical support from a Pearson's correlation test: no statistically significant correlations between these two variables both in stage 1 and 2.

In the meanwhile, the upper authority has more influence over local decision-making. The interference is a critical component because it suggests a positive relationship with the official channel. To operationalize it, we create a dichotomy variable: if a village receives any funding support from the township government in a specific year, it is coded 1; otherwise, 0.

As noted, other scholars have tried to control for social heterogeneity, which is commonly measured by the number of surnames in a village (He, 2000). This social variable aims to measure the level of social cleavage and the difficulty of reaching a consensus in village affairs (Xiao, 2001). However, our panel design with two-way fixed effects automatically controls for any influences from unobservable variables at the village and year levels. Due to the low social mobility in the 1980s and 1990s, the number of family clans stayed the same in a village for a long period of time. The social variable drops automatically from the regression analyses.

5.6.3 **Empirical Results and Discussions**

In this section, we present the empirical results of the panel analysis. As discussed several times throughout this dissertation, local officials have to secure the funding resources for local projects. The VDS dataset describes several types of funding resources: 1) Specialized loans for aiding the poor, 2) Funding provided by higher government, 3) fees paid by farmers, 4) village reserve, 5) Funding provided jointly by village, township, and county, 6) Funding raised from villagers, and 7) Others. We select all projects funded by villagers (categories 3 to 7) and calculate the total amount of social investment during each election term in each village. For example, if a VC was elected in 1995, and all public projects funded by villagers within his term (from 1995 to 1998) were grouped into a lump sum. We then take the log form of the lump sum as the DV.

After filtering out the villages with missing data, we only keep villages with two or more rounds of elections for longitudinal analysis. In total, there are 19 villages and 173 observations in the stage 1 dataset (1986-1994) and 77 villages and 203 observations in the stage 2 dataset (since 1995).

Appendix Table 5.1: Descriptive Data of the Annual Amount of Self-Funded Projects (Unadjusted)

See the appendix

Appendix Table 5.1 contains descriptive data of the self-funded public projects in an unadjusted annual amount. As seen, the value has a wide range and a large variance, which is why we take the log form to make it more scalable. The wide fluctuation reflects the village-level heterogeneity in the dataset as some villages are more economically better off than the rest of the cohort.

Appendix Table 5.2 Descriptive Information about Power Strength Index

See the appendix

Appendix Table 5.2 contains descriptive data of the IV (PSI). As a reminder, it ranges from 0 to 8 in the stage 1 dataset and 0 to 10 in the stage 2 dataset. Also, there is no clear pattern of increasing or decreasing value between the datasets in two stages.

We conduct the data analysis in the R software and use the PLM package.[31] Table 5.1 contains the panel result. In the initial stage, the level of political institutionalization, as measured by the number of signature rights, has a statistically significant negative impact on the investment amount. The more signature rights the VC has (i.e., the better institutionalized the election), the less self-funded investment amount. This is consistent with the argument that the sudden introduction of the election has brought new variation into the power equation that significantly lowers mass trust and reduces the amount of self-funded projects. Specifically,

[31] More information about the PLM package is available at: https://cran.r-project.org/web/packages/plm/plm.pdf.

when VC receives an additional signature right, the public amount decreases by roughly 10% over time, on average per village.

Table 5.1 Panel Analysis of the Annual Amount of Self-Funded Projects (Log Transformed)

	DV: The Amount of Public Investment Funded by Villagers	
	Stage 1	**Stage 2**
Power Institutionalization	- 0.10*	0.06*
Informal Network	0.27	- 0.10
Government Support	0.86***	0.24**
	n = 19, T = 7-13, N= 173	n = 77, T = 1-4, N = 203
Note: ***p<0.01; **p<0.05; *p<0.1; n is the number of villages, T is the number of years, and N is the number of observations		

However, as the election process becomes more established, villagers start having more confidence and investing in more public projects, which is supported by the statistically significant positive coefficient in the stage 2 data. When VC receives an additional signature right, the public amount increases by about 6% over time, over average per village.[32]

[32] Here is the mathematical procedure to adjust for the log transformation: e^(coefficient). For example, in stage 1, the coefficient is - 0.10, and we can apply the transformation e^(-0.1) ≈

As for the informal network, it has a positive impact on the DV in the early stage and a negative impact in the later stage. The observation is consistent with our initial hypothesis that an informal network lends support when the formal channel is still lacking but withdraws when the election becomes more established. Unfortunately, the variable fails to reach any statistical significance at both stages.

To my surprise, the control variable – government support – has a positive impact on the DV that reaches statistical significance at both stages of data. If a village receives more governmental funding, it acts as a stimulus and fosters social trust that leads to more self-funded social projects in a highly hierarchical society like rural China's. As listed in section 5.6.3, government support two types of public projects: specialized loans for aiding the poor and fiscal support. If villages receive this type of government support, they are more likely to trust other types of initiatives. If a village receives government support in one's term, it leads to a 136% and 27% increase in self-funding social projects in stages 1 and 2, respectively. Moreover, the data suggest that villagers are more likely to take cues from the government in the early stage than in the later stage. As villagers became more familiar with the electoral process, they became more self-reliant and less dependent on the upper government regarding major village decisions.

Overall, the research hypothesis is empirically supported by our panel data analysis.

Model Robustness Check

0.9. So, the interpretation is decreasing by 0.1, or 10%. In stage 2, the coefficient is 0.06, and the transformation is e^(0.06) ≈ 1.06. So, the interpretation is increasing by 0.06, or 6%.

In PLM, we can check the level of (un)balancedness for the panel design by checking two coefficients: gamma and nu. For stage 1 data, both gamma (0.977) and nu (0.975) are close to 1, suggesting a low unbalanced panel. The p-value for the overall model is highly statistically at the 0.01 level. Similarly, for stage 2 data, both gamma (0.942) and nu (0.951) are close to 1. The overall model is statistically significant at 0.1 level with a borderline p-value (0.070).

5.7 **Conclusion**

At the beginning of this chapter, the chapter identifies the gap in the Chinese village election literature and elaborates on why the time dimension is critical in any research related to political institutionalization in a transitional society. Later on, it discusses the key players in village politics and proposes a bold hypothesis, with a time-dynamic scope of analysis, that aims to disentangle the effects of formal and informal channels throughout the reform years. Using a panel design with two-way fixed effects, the empirical evidence presented here supports the proposed hypothesis and identifies the TVTE of elections in two stages of development.

In rural China, villagers lack formal channels to express their interests and are often portrayed as less capable of processing political affairs, which attracts a significant number of doubts and concerns about the end results of elections. In contrast to the ordinary understanding, Chinese villagers show a high level of political sophistication and understanding of the electoral process as they invest more in the process and become more familiar with the process. Villagers resort to the traditional family clans for support before elections become established and trust the formal electoral process in later years.

Nonetheless, there are several research limitations that we should consider in future research. First, our identification strategy of the chapter is a panel design with a two-way FE, which

largely alleviates the concerns of missing unobserved variables. However, if we can get access to the supplementary NFPS dataset, we can improve the panel design and make it more powerful. Unfortunately, the NFPS belongs to the Chinese Ministry of Agriculture, and my access request was denied multiple times.

Second, there is a missing data issue. All key variables have a small percentage of missing values. If the missing data is caused by another variable, our panel design may suffer from selection bias. However, the missing value is on a small scale, and the results should be robust to the selection bias issue.

Finally, this chapter is a quantitative effort of trying to understand the long-term effects of holding elections. It would be great if future research adopts qualitative methods to dig into the causal mechanism of the power transition.

Appendix Table 5.1: Descriptive Data of the Annual Amount of Self-Funded Projects (Unadjusted)

	Year	N	Min	Max	Variance	Mean
Stage 1	1986	13	0	310*	7172.5	29.4
	1987	17	0	300	5201.3	21.1
	1988	19	0	50	154.2	5.6
	1989	19	0	18	40	4.1
	1990	19	0	100	523.7	5.9
	1991	19	0	2520	333822.1	134.2
	1992	19	0	500	12999.11	30.1
	1993	19	0	14	18.1	2.2
	1994	19	0	120	841.0	11.4
Stage 2	1995	12	1.5	66	309.5	14.9
	1996	29	1	135	784.6	19.4
	1997	11	2	102	1000.3	25.7
	1998	16	1	47	261.3	14.3
	1999	35	0	740	21863.2	68.0
	2000	14	3	234	3963.9	47.5
	2001	13	1.9	340	8353.5	38.2
	2002	42	0.4	600	15547.4	66.2
	2003	12	1.5	442	14528.9	68.5
	2004	7	1.5	75	22.8	730.7
	2005	13	1	580	24947.4	71.5
Note: monetary value in ten thousand RMB						

Appendix Table 5.2 Descriptive Information about Power Strength Index

	Year	N	Min	Max	Variance	Mean
Stage 1	1986	13	0	8	6.2	5
	1987	17	0	8	6.9	4.5
	1988	19	0	8	6.2	4.5
	1989	19	0	8	5.4	4.7
	1990	19	0	8	5.5	4.8
	1991	19	0	8	5.5	4.8
	1992	19	0	8	6.6	4.4
	1993	19	0	8	5.9	4.4
	1994	19	0	8	5.9	4.4
Stage 2	1995	12	3	10	4.9	5.8
	1996	29	0	10	4.7	3.7
	1997	11	2	10	4.7	4.9
	1998	16	1	10	5.8	5.1
	1999	35	0	10	4.3	4.3
	2000	14	0	10	6.7	5.1
	2001	13	0	9	5.4	4.4
	2002	42	0	10	3.3	4.7
	2003	12	0	7	4.5	4
	2004	7	2	7	2.3	4.4
	2005	13	1	10	4.5	5
Note: PSI ranges from 0 to 8 in stage 1 and ranges from 0 to 10 in stage 2.						

Chapter 6 Conclusion

Ever since its inception, China scholars have been speculating how the introduction of local elections in the 1980s would facilitate the democratization process in the world's largest authoritarian regime. However, the regime has become increasingly established and resilient three decades later. This dissertation attempts to understand China's authoritarian resilience by examining the immediate policy effects after the electoral regime (Chapter 3), the evolving nature of electoral competitiveness over time (Chapter 4), and the dynamic interactions between the formal and informal channels of accountability (Chapter 5).

Specifically, Chapter 3 exploits the lagging introduction of village elections and adopts a quasi-experimental design that combines difference-in-differences and matching. By comparing both social and economic outcome variables, the chapter finds that the abrupt electoral reform brought immediate government accountability. The increased level of government accountability is largely due to the extra electoral incentive: local officials respond to electoral stimuli even in authoritarian settings. As a result, they choose to implement public policies in a way more preferable to the villagers.

Chapter 4 examines the evolving nature of electoral competitiveness and aims to answer the question: will more competitive elections bring in more government accountability? By developing a three-prong definition of electoral competitiveness and utilizing a panel design with two-way fixed effects, the chapter fails to identify any significant results. There may be several possible reasons. One possible reason is because of the multi-layer definition requires a longer time frame, and the three-decade timespan is not long enough.

Chapter 5 tries to separate the roles of formal and informal accountabilities and understand how they interact in the long run. Best to my knowledge, this is the first work trying to

understand this type of dynamic relationship between these two channels of accountability. The chapter adopts a panel model with two-way fixed effects and finds that the level of political institutionalization has a negative effect on self-funded public investment in the early stage but a positive effect in the mature stage. Meanwhile, the chapter finds a diminishing effect of government-led public investment, indicating a less dependency on official signals over years.

Overall, the empirical analyses support the argument that elections bring in more government accountability and become more established in the rural areas. The findings send a positive signal that elections as political institutions are taking root at the grassroot level and become an integer part of villagers' political life.

Nonetheless, this dissertation contains several limitations. First, it does not have access to the village-level social and economic variables. Fortunately, the adopted quasi-experimental designs are robust to these missing variables. Second, the findings from the Chinese case may not be generalizable to other authoritarian regimes. China is a unique authoritarian regime with a long history of government centralization, cultural and economic factors that favor power hierarchy, and a high level of state power, which are often absent in other authoritarian regimes. Leaving out these contributing factors, it is impossible to talk about the dynamic relationship between the formal and informal channels of accountability.

This dissertation has significant implications for the study of authoritarian regimes and political institutionalization of elections. The extant literature adopts a fixed approach to study the effects of elections and does not consider the possibility of a dynamic relationship between political actors and political institutions. Moreover, most of these studies rely on cross-sectional data that are known for missing the causal direction. The present study makes original contributions in these aspects.

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