

Public participation in democracy, local accountability and happiness: Evidence from rural China

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Direct nomination of local leaders by Chinese villagers boosts accountability and happiness



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What is it about?

This study examines how an important reform of local governance—village democracy—in the world's most populous areas has affected the happiness of residents in rural China. We find that introducing elections per se has no significant impact. In comparison, direct nomination of local leaders by villagers, which is a form of competitive election involving a high degree of public participation in political decision making, leads to higher levels of happiness. Further mechanism analyses show that direct nomination improves the local accountability of elected leaders by boosting the quality and effort of village heads and their governance performance by lowering the tax burden of villagers and vitalizing local public services.

Why is it important?

Our results highlight the importance of public participation in democracy and the underlying role of local accountability in affecting the subjective well-beings of citizens. Although China's rural elections have been implemented for nearly 30 years, no systematic work seems to examine their impact on the happiness of villagers, excepting the one by Chen et al. (2014) that relies on limited data from several central and western provinces. In this regard, the current study is among the first to conduct this analysis by employing nationwide representative samples of rural China and exploring the underlying mechanisms. In particular, our study contributes to the literature in three aspects.

First, we speak to the literature regarding the impact of democratic participation on citizens' happiness. Our unique contribution shows that the form of democratic participation is an important factor in understanding the nexus between democracy and happiness.

Second, we identify local accountability as a mechanism through which village elections help breed happiness.

Third, we use the instrumental variable method as an attempt of causal inference to address the potential endogeneity issue that exists in the democracy-happiness relationship because of reverse causality and omitted variable bias.

Perspectives



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This study reflects the interactions between political science (elections), public administration (local governance and local accountability), public finance (taxation and public goods provision), political economy, and behavioral economics (happiness). I have gained a lot during the long writing and revision process from discussing with various researchers in the above fields/disciplines. I believe more cross-field and interdisciplinary dialogues can benefit the academia and society.

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Public Participation in Democracy, Local Accountability and Happiness: Evidence from Rural China*

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Public Participation in Democracy, Local Accountability and Happiness: Evidence from Rural China

Abstract: This study examines how an important reform of local governance—village democracy—in the world’s most populous areas has affected the happiness of residents in rural China. We find that introducing elections *per se* has no significant impact. In comparison, direct nomination of local leaders by villagers, which is a form of competitive election involving a high degree of public participation in political decision making, leads to higher levels of happiness. Further mechanism analyses show that direct nomination improves the local accountability of elected leaders by boosting the quality and effort of village heads and their governance performance by lowering the tax burden of villagers and vitalizing local public services. Our results highlight the importance of public participation in democracy and the underlying role of local accountability in affecting the subjective well-beings of citizens.

Keywords: Public participation; Grassroots democracy; Local accountability; Governance performance; Happiness; China

1. Introduction

This study investigates whether the public's democratic participation through election, which is an important aspect of institutions, increases villagers' happiness in rural China. Scholars debate about whether better institutions and governance, such as political freedom, anti-corruption, and the rule of law, empower citizens and breed their happiness (Veenhoven, 2000; Dorn et al., 2007; Tavits, 2008; Nikolova, 2016; Wu & Zhu, 2016). As an institution of public engagement, democratic participation relates to both decision making and policy outcomes, and, therefore, understanding its impacts on citizens' well-being is critical.

Yet, the current literature regarding the democracy–happiness relationship has three limitations. First, consensus about such a relationship is not reached. Some studies suggest a positive impact of democracy on happiness (Frey & Stutzer, 2000; Dorn et al., 2007; Owen et al., 2008), whereas others conclude no such causal impact (Inglehart & Klingemann, 2000; Lane, 2000; Dorn et al., 2008; Inglehart, 2009). The focuses on different dimensions of democracy may be part of the reason for the inconsistent findings among these studies.¹ Second, the literature tends to focus on the general relationship between democracy and happiness, overlooking the form of democratic

¹ For instance, Frey and Stutzer (2000) and Dorn et al. (2008) examined direct democracy in terms of initiatives and referenda at the region level (Swiss Cantons). Inglehart and Klingemann (2000) adopted the country-level Freedom House democracy index that emphasizes political rights and civil liberties, whereas Inglehart et al. (2008) and Owen et al. (2008) used the country-level Polity IV democracy index that is based on three dimensions: political participation, competitiveness of executive recruitment, and constraints on executive power. Dorn et al. (2007) employed Polity IV democracy index and Freedom House democracy index.

participation. Democratic participation can take many different forms, which may have distinct implications for happiness. In the case of rural election in China, even though elections of village leaders exist in most villages, candidates of village leaders are nominated and selected through different methods. Among them, direct nomination of village leaders by electorate, which involves a high degree of public participation in political decision making, may matter more than the election *per se*.² For instance, Kennedy (2002) pointed out that direct nomination of village leaders by villagers is the most competitive election method and determines the effectiveness of elections in rural China. Third and finally, little is known about how democratic participation in rural China, the world's most populous areas, affects the happiness of villagers (Chen et al., 2014).

This study seeks to bridge these gaps by exploring the impact of competitive election, with a particular focus on the direct nomination of village leaders by villagers, on the happiness of villagers in rural China. Specifically, we leverage individual-, household-, and village-level survey data to investigate the happiness effects of village democracy in rural China. Our estimation results based on the ordinary least-squares regression and instrumental variable methods show that the implementation of village elections has no significant effect on villagers' self-perceived well-being. However, the happiness of villagers is generally higher in localities where they directly nominate village committee members (cadres in short). This result suggests that merely

² As elaborated in Section 3 of this paper, the main forms of nomination for village heads in China are direct nomination by villagers, nomination by the village party branch, and nomination by the township party committee.

implementing democratic elections is insufficient (O'Brien & Han, 2009); rather, the design of the electoral process and the extent of public participation in decision making are more important.

Furthermore, we provide evidence on a mechanism through which public participation in democracy affects happiness: it boosts governance performance (Besley & Burgess, 2002; Meng & Zhang, 2011; Neshkova & Guo, 2012; Costa-Font & Parmar, 2022). We show that for villages with direct nomination, village heads have higher qualities measured by their education levels, exert more efforts in seeking help from the township government to solve village problems, and perform benign governance such as cutting/lowering taxes and fees (including fines), improving household coverage rate of tap water and villagers' participation in rural pension schemes, and spending more on public goods in the per capita sense.

Although China's rural elections have been implemented for nearly 30 years, no systematic work seems to examine their impact on the happiness of villagers, excepting the one by Chen et al. (2014) that relies on limited data from several central and western provinces. In this regard, the current study is among the first to conduct this analysis by employing nationwide representative samples of rural China and exploring the underlying mechanisms. In particular, our study contributes to the literature in three aspects.

First, we speak to the literature regarding the impact of democratic participation on citizens' happiness. Our unique contribution shows that the form of democratic participation is an important factor in understanding the nexus between democracy and

happiness. We complement the existing literature by demonstrating that having election in place alone does not necessarily breed happier people. Rather, the design of electoral process and the extent of public participation in democracy matter more. Specifically, we show that competitive elections, such as those with direct nominations for political leaders, can bring added values (in terms of citizen happiness and government performance) at the *local* level.³

Second, we identify local accountability as a mechanism through which village elections help breed happiness. We find that villagers' nomination can enhance the quality, effort, and performance of village committees. These results are consistent with the general governance literature on the central role of public participation (Frey & Stutzer, 2000; Radcliff, 2001; Inglehart et al., 2008; Chen et al., 2014) and governance performance (Ott, 2011; Ma, 2017; Helliwell et al., 2018) in citizens' satisfaction and well-being in China and other countries. Thus, our study has policy implications for markedly improving grassroots governance and enhancing citizens' happiness.

Third, we use the instrumental variable method to address the potential endogeneity issue that exists in the democracy–happiness relationship because of reverse causality and omitted variable bias. In this regard, we propose a group of instrumental variables that are justified to be theoretically relevant and empirically valid.

³ In this regard, two additional points are worth mentioning. On the one hand, rural democracy in China shares similar characteristics with practices in other countries: villagers are empowered to elect village committee members and, in some places, directly nominate candidates, thus exerting influences on village governance. This satisfies the widely used minimal definition of electoral democracy (Przeworski et al., 2000). On the other hand, the rural democracy reform in our study is at the *local* level within an overall authoritarian regime without country-level direct elections, which differs from regional or country level of democracy in other studies.

2. General Literature on Democracy and Happiness

In this section we first summarize the general literature on the democracy–happiness relationship. We then discuss the studies on the impact of democracy on accountability, the potential mechanism through which democracy may affect happiness.

2.1. Impact of Democracy on Happiness

There is a small but growing literature on the relationship between democracy and citizens' happiness. Most studies suggest a positive impact of democracy on happiness, even after adjusting for welfare provision, income, and culture (Radcliff, 2001; Dorn et al., 2007). Cross-national research proposes that the positive impact mainly comes from democratic participation, freedom of choice, and the favorable results of democratic competition; particularly, the positive impact of political participation on happiness is much higher than the positive impact of better policy (Frey & Stutzer, 2000; Inglehart et al., 2008).

By contrast, only a few studies claim no causal impact of democracy on happiness (Inglehart & Klingemann, 2000; Lane, 2000; Dorn et al., 2008; Inglehart, 2009). Recent studies suggest that the democracy–happiness relationship may be heterogeneous and contingent on other factors. For example, democracy can only improve national happiness when countries have reached a certain level of economic development (Veenhoven, 2000; Helliwell & Huang, 2008; Bjørnskov et al., 2010; Ott, 2010) or when technical and service delivery quality of governance is sufficiently high (Ott, 2011;

Helliwell et al., 2018). Similarly, Dorn et al. (2007) suggested that the impact is larger for countries with an established democratic tradition. By contrast, Orviska et al. (2014) showed that the positive impact of regional democratic satisfaction on happiness is only evident for men, poor people, and poor countries. Radcliff and Shufeldt (2016) suggested that in the United States, the overall positive impact of direct democracy on residents' life satisfaction decreases with income.

In the Chinese context, the most closely related research to our study is that of Chen et al. (2014). They found that strengthening village democracy can significantly enhance villagers' happiness for non-poor households but not for the poor ones. However, their study only covers 120 poor villages in central and western China and, thus, lacks national representativeness. In addition, they did not analyze the mechanisms through which democracy affects villagers' happiness.

2.2. Impact of Democracy on Accountability

This subsection provides an overview on the impacts of democracy on the quality of political leaders and governance performance, which serve as the most relevant mechanisms through which democracy exerts an impact on happiness.

Quality of Political Leader. One mechanism through which democracy affects government performance and local accountability is the quality of the elected government leader. Existing literature demonstrates that democracies tend to select more educated leaders compared with autocracies (Besley & Reynal-Querol, 2011). Moreover, education is often considered as a compelling indicator of the quality of

political leaders (Besley & Reynal-Querol, 2011; Martinez-Bravo et al., 2022). This is mainly due to the following two reasons. First, overwhelming evidence reveals that education increases individual skills and/or signals individual ability (see Card (1997) for a review), which are valuable for employment and may transfer to better performance as a political leader (Besley & Reynal-Querol, 2011). Second, empirical evidence also shows a link between education and public-spiritedness. That is, more educated individuals tend to involve more in charitable giving and other measures of citizenship (Dee, 2004; Milligan et al., 2004). A possible explanation for this is that education cultivates skills that appreciate the needs of others (Besley & Reynal-Querol, 2011). As citizens prefer competent and honest leaders, more educated political leaders are reasonably regarded as having higher quality.⁴

Governance Performance. Theoretically, given the similarity between electoral (political) competition and economic (market) competition, electoral competition helps reduce political rent and, therefore, improves governance performance (Stigler, 1972). Most studies show that grassroots democracy can significantly increase public goods provision, such as in India (Besley & Burgess, 2002; Costa-Font & Parmar, 2022) and Indonesia (Olken, 2010). Cross-national evidence suggests that the impact is heterogeneous, depending on various *ex-ante* characteristics. For instance, the effect tends to be larger in countries with higher degrees and longer durations of democracy

⁴ In addition, the educational attainments of political leaders have positive effects on economic growth and governance performance, even after controlling for job-related experience (Avellaneda, 2009; Besley et al., 2011). In rural China, college graduate village officials crowd out less-educated existing village cadres and help the publicity and implementation of pro-poor programs (He & Wang, 2017).

(Carbone & Memoli, 2015) and higher levels of enforcement capacity (D'Arcy & Nistotskaya, 2017).

In China, previous studies find that rural democracy reduces inequality (Shen & Yao, 2008) and improves village governance performance such as a higher level of public good provision (e.g., Zhang et al., 2004; Shen & Yao, 2008) and enhanced administrative efficiency in terms of low shares of administrative costs (e.g., Meng & Zhang, 2011). Moreover, rural democracy significantly lowers the burden of villagers by shifting the distribution of taxation from individuals to enterprises (Zhang et al., 2004).

3. Institutional Background and Theoretical Hypotheses

3.1. Institutional Background

The Constitution of China enacted in 1982 officially confirmed the status of villagers' committee as a mass autonomous organization at the rural grassroots.⁵ In 1988, the central government of China began the trial implementation of the Organic Law of Villagers' Committees (hereafter, the Organic Law) in some areas and clearly defined the functions, organizational structure, and election methods of village committees. However, this version of the Organic Law did not specify the regulations

⁵ The villagers' committee is mainly responsible for maintaining rural public security and managing economic and cultural affairs. It coordinates the allocation of land resources and provision of public goods, including roads, schools, and water conservancy, involving all aspects of the villagers' daily lives that play vital roles in rural development and poverty alleviation (Martinez-Bravo et al., 2022).

on the nomination methods of village committees. In 1998, a revision of the law required that the candidates should be determined through direct nomination by villagers rather than by the village party branch or the township party committee (i.e., not-direct nomination methods). Nevertheless, village election and especially direct nomination method were not immediately conducted in all villages of the country though, leading to a variety of election statuses and nomination methods adopted in rural China several years after 1998. Particularly, in villages where the Organic Law was in place, elections, with different nomination methods for local cadres, have been adopted; in other villages without the implementation of the Organic Law and hence no rural elections exist, their village committees remain being appointed directly by township officials (O'Brien & Li, 1999).⁶

At the onset of each election, a village election committee is appointed (by township officials, the village representative assembly, or party secretaries of the villages) to manage the whole electoral process, which includes registration, nomination and selection, campaign, voting styles and procedures, and the vote count.⁷ Among which, nomination and selection of candidates is the most complicated and critical stage in the election. Practically, three types of nomination methods of candidates emerge among villages holding elections—villager, party branch, and township party committee nominations. Villager nomination is open nomination, meaning individuals and groups can nominate candidates directly.⁸ This nomination

⁶ The determinants of timing issues are discussed in Section 5.3.

⁷ See Pastor and Tan (2000) for a detailed discussion on the electoral process in rural China.

⁸ Specifically, there are four prevailing methods of villager nomination: “open sea” nomination (i.e., any

method fully implements the election law, and most of the villagers are satisfied with it (O'Brien, 1994), leading to the most villager participation in election and the highest level of uncertainty about the candidates being elected. Party branch nomination is a method that village party secretary typically nominates the candidates, who are pre-selected before the elections. The party secretary announces the candidates at the village assembly with their names pre-printed on the ballots for villagers to elect. With this nomination method, villagers have fewer incentives to participate in the election as there is little uncertainty in the electoral outcome. Finally, township party committee nomination is a method wherein the township party committee typically selects the candidates, exhibiting no significant difference from the direct appointment by township officials (in the case without village election). In this method, the elected leaders become even more predictable and much less uncertain as identifying the persons who have the closest connection to the township governments is not difficult for villagers.

The differences in the three nomination methods for candidates affect villagers' incentives to participate in election and determine to whom the elected leaders are accountable and their consequent behaviors. These should have an impact on villagers' subjective happiness. We elaborate these mechanisms in the next section.

villager or group can nominate a candidate), group nomination, small-group nomination, and head-of-the-household nomination. Despite the variation, the four types of method share the key feature that the villagers nominate the candidates. See more detailed discussion in Kennedy (2002).

3.2. Theoretical Hypotheses

In rural China, the form of democratic participation, such as the candidate nomination methods illustrated in subsection 3.1, plays a crucial role because it decides whether the village committee members can truly represent the interests of villagers. It then affects the effectiveness of elections and governance performance. Among the three nomination methods, direct nomination by villagers is the most competitive one with a high degree of public participation in decision making. This is because (1) it allows competition in the nomination and election stages (Landry et al., 2010); (2) its election outcome is less manipulated by the party committee and, therefore, less predictable (Kennedy, 2002); (3) it promotes active villagers to join the candidate pool (Kennedy & Shi, 2012); and (4) it promotes the participation and turnout rate of village voters (Su et al., 2011). Kennedy (2002) compared the competitiveness, villagers' participation, satisfaction, and election outcome of these nomination methods based on survey data and supported the view that direct nomination is the most competitive method (see Table 1).

[Table 1 about here]

A “dual-power system” exists in rural China wherein the appointed party branch and elected village committee share decision power. Nonetheless, high-quality rural elections, such as those with direct nomination by villagers, significantly increase the available resources of the committee, lower the proportion of party members in the elected committee, and empower the committee in certain governance affairs (Oi & Rozelle, 2000; Mu & Zhang, 2014).

Various empirical studies show that the competitiveness of electoral competition improves local accountability because it increases the quality of government leaders and governance performance for several reasons. First, high-quality candidates are more likely to be nominated owing to reelection incentives and the competition to win swing voters, especially in contestable districts (Galasso & Nannicini, 2011). Second, political competition induces candidates to pursue growth-promoting policies rather than special-interest policies to efficiently attract swing voters (Besley et al., 2010). Specifically, in rural China, nomination methods of village election largely determine to whom, reflected by pro-villagers versus pro-government policies, the elected village committee is accountable for, hence shaping the election and re-election incentive structure of the candidates. For instance, local cadres elected by direct nomination are more accountable to villagers in land allocation (Kennedy et al., 2004), whereas local cadres nominated by township officials tend to be more accountable to upper-level government officials (Kennedy, 2002), such as handing a larger share of revenues to township governments (Wang & Yao, 2007).

Local accountability is an important mechanism for democracy to affect happiness. Better governance performance such as more and better public goods, lower inequality, and better governmental services all contribute to higher level of happiness (Alesina et al., 2004; Ott, 2011; Helliwell et al., 2018; Liu et al., 2020).

Building on the existing literature, we argue that direct nomination may matter more than election *per se* for happiness, and local accountability is a mechanism of such an impact. Our argument is in line with the finding of Kennedy (2002) that

villagers are highly aware of “real” and “cosmetic” elections and the finding of Frey and Stutzer (2000) that the degree of democracy matters in happiness. In the following sections, we use a nationally representative sample to analyze the impact of rural democracy in China on the happiness of villagers and examine the mechanisms of accountability.

According to the literature and our analytical framework, we propose and examine the following two hypotheses.

H1: *Village democracy, especially direct nomination, improves the subjective well-being of villagers in rural China.*

H2: *Village democracy, especially direct nomination, improves local accountability of the village heads in rural China.*

4. Methods

4.1. Data

The empirical analysis of this study is based on the survey data of the 2002 Chinese Household Income Project (CHIP-2002), which was designed and implemented by the Chinese Academy of Social Sciences and National Bureau of Statistics. In CHIP-2002, rural and urban residents in 21 provinces and municipalities across the country were surveyed. This research uses the survey data collected in rural areas at the individual, household, and village levels. The original data mainly include information of 37,969 villagers in 9,200 households from 961 villages. The individual/household sample

contains individual/household information on demographic characteristics; income, consumption, and their detailed components; assets and liabilities; work and employment information; social-network information; quality of life information; and village-affairs data. Variables at the village level cover nearly all aspects of villages, including basic geographic information, arable land, agriculture activities, collectives, enterprise, labor force, income, productivity, population, government budget, taxes, expenditures, rural elections, and the characteristics of government officials. Apart from the extensive information of CHIP-2002 at the individual and village levels, another reason for using the CHIP-2002 survey data is the sufficient variation of rural elections across villages in the data. By contrast, recent surveys lack such variation owing to the rapid national-level implementation of rural elections. Moreover, since from mid-2000s, the importance of rural elections has been undermined by recentralization, such as reducing the powers of village officials and *de facto* autonomy of village councils (Oi et al., 2012; Martinez-Bravo et al., 2022), making a simple examination on more recent elections less meaningful (O'Brien & Han, 2009).

4.2. Empirical Strategies

To test Hypotheses 1 and 2, we estimate the following village-level and individual-level empirical models, respectively.

$$Happiness_{ij} = \alpha_1 + \beta_1 Democracy_j + \gamma_1 Z_j + \lambda_1 X_{ij} + \varepsilon_{ij}, \quad (1)$$

$$Accountability_j = \alpha_2 + \beta_2 Democracy_j + \gamma_2 Z_j + \varepsilon_j. \quad (2)$$

Where $Happiness_{ij}$ and $Accountability_j$ are the dependent variables in models (1) and (2), respectively. The first dependent variable is the subjective well-being of

villager i located in village j ; the second dependent variable is our measure of local accountability, which, in turn, is captured by quality, effort, and governance performance of the village cadres. $Democracy_j$ is a set of rural democracy measures, including village election and direct nomination, which may have different effects. Z_j is a set of village-level control variables, X_{ij} is a set of control variables reflecting villagers and their households' characteristics, and ε_{ij} and ε_j are the error terms.

4.3. Key Variables

Subjective Well-being. This dependent variable in model (1) comes from a question in the household survey questionnaire: "Do you feel happy now?" The 5-point Likert scale ranges from very happy, happy, neither happy nor unhappy, unhappy, to very unhappy. The questionnaires were completed by the head of each household or a main family member.⁹ As only the family representative responded to this survey question, it mainly reflects the representative's status of subjective well-being. Therefore, our final sample is at the individual level. We reverse the original coding for easy presentation of the results, with 1 indicating "very unhappy" and 5 "very happy." The literature shows that subjective welfare indicators, although imperfectly, reflect the substantive feelings of well-being of the respondents and can be used for interpersonal comparison (Di Tella & MacCulloch, 2006).

Local Accountability. Local accountability is measured by three dimensions: quality, effort, and governance performance of village cadres. Following the literature

⁹ The data indicate that 75% of the questionnaires were answered by the heads of the households, 22% by the spouses of the heads, and 2% by the children of the heads.

(Avellaneda, 2009; Besley et al., 2011; Martinez-Bravo et al., 2022), we employ education level of the village head as a proxy for their quality, whereas effort of the village head is captured by their effort in reporting village problems to the township government and seeking its help. For governance performance of the village head, we examine the taxes and fees cut, gross rate of taxes and fees (including fines such as fines for violations of birth control policies), household coverage rate of tap water, village-level participation in rural pension schemes, and public goods provision.¹⁰

Democratic Participation. We follow Oi and Rozelle (2000) to measure rural democracy by utilizing two variables: (1) whether villages have implemented elections and (2) the nomination methods of village cadre candidates. In particular, we rely on the following two questions in the village-level questionnaire: (1) “Has your village implemented the election of village committee up to the end of 2002?” (1 = “yes,” 0 = “no”) and (2) “Were the village committee member candidates directly nominated by the villagers?” (1 = “yes,” 0 = “no”).

Figure 1 depicts the provincial distributions of village elections and direct nominations. The implementations of village elections and direct nomination are quite random without clear geographic patterns. Table A1 in the Online Appendix compares the characteristics of villages with and without village elections or direct nominations. Compared with villages without direct nominations, those with direct nominations had

¹⁰ Villages have sufficient fiscal autonomy and are responsible for many policies (Martinez-Bravo et al., 2022), including poverty alleviation, actual collections of taxes, fees, and fines, execution of family planning policies, and provision of local public goods, such as water, health, education and production facilities.

a larger population and were less likely to suffer natural disasters in 2002. Compared with villages without elections, those with elections were less likely to suffer natural disasters in 2002. Other features are similar across villages with different democracy status.

[Figure 1 about here]

4.4. Control Variables

For models (1) and (2), we control for relevant village characteristics, including whether it is in a minority area, whether it is in the western region, its distance to the township, per capita net income in 1998 (in Chinese *yuan*), total population of the village, and whether there is any natural disaster in the survey year. For per capita net income of the village, we use the pre-determined value in 1998 instead of 2002 to avoid the endogeneity problem.¹¹

For the individual-level model (1), we further include three sets of control variables at the villager level based on the literature and data availability. These factors include age, gender, education, health, working status, absolute income, relative income, income prospects, and social relationships (Clark et al., 2008) as well as reference points, life aspiration, evaluation of improvements of living conditions, and expectation of income growth in the coming years (Frey & Stutzer, 2000).

The first set of variables reflect the basic characteristics of the villagers, including age, age squared, gender, nationality, mood, marital status, years of education, health

¹¹ Controlling for per capita net income of the village in 2002 leads to very similar results (available upon request).

status, political status, whether the interviewee has been or is currently a cadre, net income per capita, net household assets, and employment status.

In the second set of control variables, we add number of children and characteristics of the interviewees' spouses, including years of education, employment status, health status, political status, and whether they have been or are currently cadres.

In the third set of control variables, we add variables that reflect the relative income level of households, changes in their inter-temporal living conditions, and their future income expectations.¹²

4.5. Descriptive Statistics

We obtain about 9,000 individual-level observations with complete information for our study. The large observation numbers of villages and villagers facilitate meaningful statistical analyses. Figure 2 presents the detailed distribution of the happiness scales.

[Figure 2 about here]

Table A2 in the Online Appendix shows the descriptive statistics of the main variables. The average value of happiness of the samples is 3.67, which is between the answers “neither happy nor unhappy” and “happy.” The average age of the sampled

¹² The variables come from three questions in the individual and household questionnaires: (1) “What is the income level of your household in the village?” (Answers 1 to 5 mean much above average, above average, average, below average, and much below average); (2) “How is your life compared with that five years ago?” (Answers 1 to 3 mean better, almost the same, and worse); (3) “How do you expect your household’s income to change in the next five years?” (Answers 1 to 4 are increase greatly, increase slightly, constant, and decrease).

villagers is 45.35 years old, with males accounting for 75%, which is a relatively high ratio. The reason is that 75% of the household questionnaires were answered by the heads of households. The table also shows other aspects of respondents' demographic, socioeconomic, family, and political status, and it suggests large wealth variations as well as their overall optimistic views about future economic situations.

5. Empirical Results on Happiness

In this section, we present the estimation results for H1, which summarize the impacts of village democracy on villagers' happiness. In the next section, we explore the mechanisms (H2).

5.1. Baseline Results

Table 2 reports the results of the standard ordinary least squares (OLS) regression of individual-level model (1). In Column 1, we only control for exogenous variables including age, age squared, gender, nationality, and the respondent's mood on the day of survey interview, which may affect the respondent's answer of happiness. We then gradually add different sets of control variables in Columns 2–4. Moreover, provincial dummy variables are included to control for the differences in economic and social development and culture across regions. Standard errors are clustered at the village level because of the potential correlation among the villagers in the same village. These results suggest that the coefficient on elections is negative and insignificant, whereas

the coefficient on villager direct nomination is positive (approximately 0.10) and all significant at the 5% or 10% level. Thus, having elections in place does not necessarily improve villagers' happiness, whereas direct nomination of village cadres by the villagers, which involves a high level of public participation in village election, makes a difference.

[Table 2 about here]

5.2. Robustness Checks

Probit Model Estimations. We recode the happiness variable to a binary dummy variable, with 1 indicating “very happy” and “happy” of the interviewees; 0, otherwise. We then utilize the Probit model. Table A4 in the Appendix shows that the estimation results of the Probit models are qualitatively similar to those of the OLS estimations. Therefore, we treat the happiness variable as cardinal hereafter, as justified by Ferrer-I-Carbonell and Frijters (2004).

Multi-level Modeling. Given the hierarchical nature of our data, we also conduct multi-level modeling in Table A5 of the Online Appendix, where villages are set at the higher level and individuals are set at the lower level. The results are similar to those in Table 2 with OLS regressions clustered at the village level.

Placebo Tests. Intuitively, rural democracy should have the most direct impact on villagers living in the villages compared with those villagers living outside. In addition, its impact may be more salient for non-cadre villagers as they may benefit more from

better governance performance compared with village cadres.¹³ We formalize these into a research hypothesis and utilize it as placebo tests. The corresponding analysis is discussed in Online Appendix II, where we find supporting evidence for these conjectures.

5.3. Instrumental Variable Estimation

A potential problem of the previous results is the estimation bias caused by endogenous selection. This problem may be caused by the reverse causality between village elections and villagers' happiness or omitted variables. Province-level and village-level timing differences in implementing the Organic Law are observed, and most of the timing issues are determined by political bargaining, opposition from local government, and the history of pilot elections (O'Brien & Li, 1999). For instance, township officials may oppose election due to interest-related concerns, whereas villagers may enhance their bargaining position by protesting and seeking support from higher-level officials.

We employ the instrumental variable method to address the endogeneity issue. The instruments we use are as follows: (1) whether the village is in mountain areas, (2) number of years of the current village party secretary in office, and (3) whether the proportion of households with the five most popular surnames in the village is above 50%. Due to space constraints, we discuss the rationale and validity for such instruments in detail in Online Appendix III.

Table 3 presents the results of the instrumental variables estimations. Panels B

¹³ Upon the implementation of rural democracy, the subjective well-being of cadres may not improve owing to lower political rents.

and C show that the selected instruments are strongly correlated with election and direct nomination, and the F-statistics values of the first-stage regressions are all above 10. Moreover, the p-values of the Hansen statistics imply that we cannot reject the null hypothesis of no correlation between the instruments and error term in the regressions. Panel A shows that the association between election and happiness remains statistically insignificant, whereas direct nomination of candidates by villagers positively and significantly affects villagers' happiness ($p < 0.1$ for three specifications and $p = 0.11$ for another specification). As instrumental variable estimations tend to inflate standard errors and we only have about 900 village-level clusters, we also present p-values (all $p < 0.05$) derived from wild bootstraps using 999 repetitions (Cameron et al., 2008). The estimated coefficient of direct nomination ranges from 1.1 to 1.6. Given that the values of happiness range from 1 to 5, villager nomination can considerably increase happiness.

[Table 3 about here]

6. Mechanisms

This section discusses the estimation results for H2, which, in turn, shed light on the possible mechanism of local accountability through which village democracy affects happiness. We employ the quality, effort, and performance of the village head as dependent variables of model (2). The corresponding results are reported in Table 4.

Quality of Village Heads. We first look at whether direct nomination by villagers

can select more competent village heads and follow the literature (Besley et al., 2011; Martinez-Bravo et al., 2022) to employ education of the village head as a proxy for their quality. That is, we estimate model (2) with village head's education as the dependent variable. The results in Column 1 of Table 4 show that in villages with direct nomination, village heads are significantly better educated.

[Table 4 about here]

Effort of Village Heads. We then examine the effort of village heads to report village problems to the township government and seeks its help. Column 2 in Table 4 shows that village heads selected through direct nomination make more efforts to help solve village problems.

Village Governance Performance. Compared with village cadres selected by other election methods, cadres directly nominated by the villagers may understand the grassroots issues more deeply and knowing better the villagers' most urgent needs. In this sense, direct nomination may improve the level and efficiency of public goods provision at the village level. In addition, direct nomination by villagers can encourage their enthusiasm for participating extensively in the process of village governance and expressing more demands for public goods. Therefore, when the villagers' demands for public goods are better met, their life satisfaction and happiness are improved accordingly.

To investigate this aspect, we estimate model (2) with a series of dependent variables at the village level. We first look at the *de facto* burden of taxes and fees for the villagers, which is unfavorable among villagers because it reduces their disposable

incomes. However, this burden may be lowered down in a better democratic environment. The reason is that although the *de jure* tax rate is determined by the central authority, village committees have some discretion on the *de facto* burden. On the one hand, they have the right to levy some fees on households prior to the Tax-for-Fee reform in 2004 (Meng & Zhang, 2011; Oi et al., 2012). On the other hand, selective tax collection widely exists in rural China (O'Brien & Li, 2017). Therefore, the *de facto* burden can be considered as a proxy for accountability of village leaders. We also examine the village-level participation in rural pension schemes and household coverage rate of tap water, both of which are important for villagers' daily life and health. Finally, we aggregate the village expenditures on various public goods, including production service, education, medical care, infrastructure, and public welfare.

The estimation results in Column 3 of Table 4 are generally consistent with our expectations and the previous findings. Village elections do not have significant impacts on these outcome variables, whereas direct nominations of village cadres by villagers have positive and significant impacts ($p < 0.05$ or 0.10). Particularly, direct nominations lead to taxes and fees cuts for the village, lower *de facto* gross rate of taxes and fees (including fines for violations of family planning policies), higher household coverage rate of tap water and villagers' participation in rural pension schemes, and more public goods expenditure per capita. For example, the estimated coefficient of direct nomination is 0.318 in Column 7, implying that the implementation of direct nomination by villagers can increase the per capita public goods expenditure by

approximately 37%. This finding echoes some of the existing relevant studies discussed in Section 2 (e.g., Shen & Yao, 2008; Meng & Zhang, 2011). By contrast, Column 8 shows a placebo test that direct nomination is not significantly associated with administrative expenditures. This outcome is also consistent with our expectation because administrative expenditures receive more effective monitoring in a real democratic environment.

7. Conclusion

This study uses the CHIP-2002 data to investigate the relationship between rural democracy and subjective well-being of villagers. In particular, this research explores the influence of procedural differences in elections (i.e., whether to implement direct nominations by villagers and thus have a high level of public participation in election) on happiness. The results indicate that merely promoting democratic elections in rural China cannot increase the happiness of villagers. In reality, public participation in the democratic procedure is even more important: village cadres elected with direct nomination are more responsible and make decisions consistent with the interests of the masses, such as increasing the public expenditure of villages and enhancing rural production and living conditions. Evidently, these factors contribute to improving the happiness of villagers.

Our findings have important policy implications. They suggest that nominal democracy cannot bring about an increase in happiness. China's rural elections have

changed the political ecology and governance structure of the grassroots, giving numerous farmers extensive autonomous rights. However, various problems remain, such as bribery, illegal black-box operations, and excessive intervention by superior governments. These issues lead to a decline in the enthusiasm of some villagers and even negative emotions. Accordingly, what is crucial is how democratic procedures are designed and implemented in practice. Only by ensuring the fairness and high degree of public participation in decision making will the results be satisfactory to the public. The key point of democracy's function is the design, implementation, and continuous improvement of the system. Thus, democratic election is only the beginning. The follow-up construction of the related mechanisms, such as public supervision, democratic decision making, and democratic management, is equally important. Lastly, only by making all procedures open, transparent, and fair can rural governance be improved, the interests of villagers be protected, and eventually their happiness be increased.

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Tables and Figures

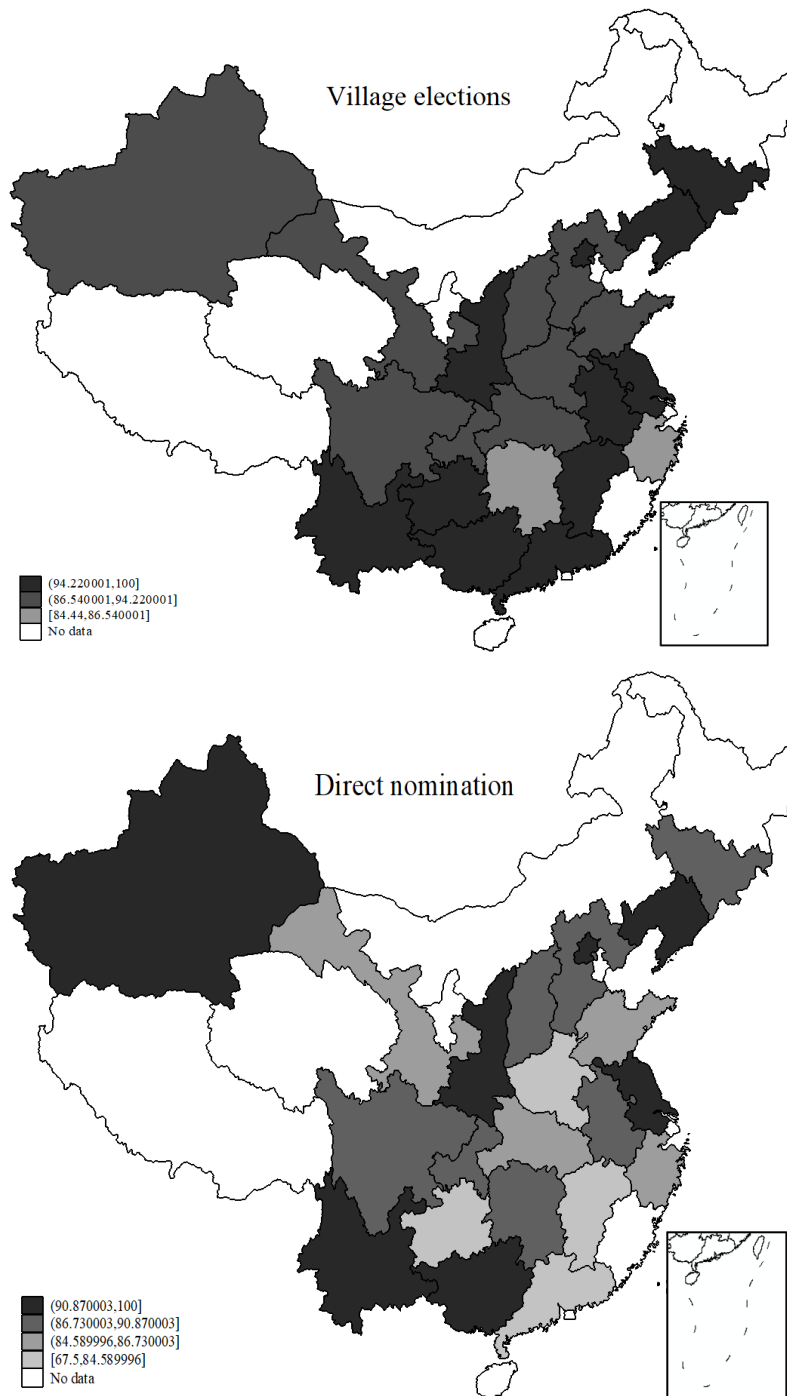


Figure 1: Provincial Distribution of Village Elections and Direct Nomination

Note: The numbers represent the percentage of villages with village elections and direct nomination in each province.

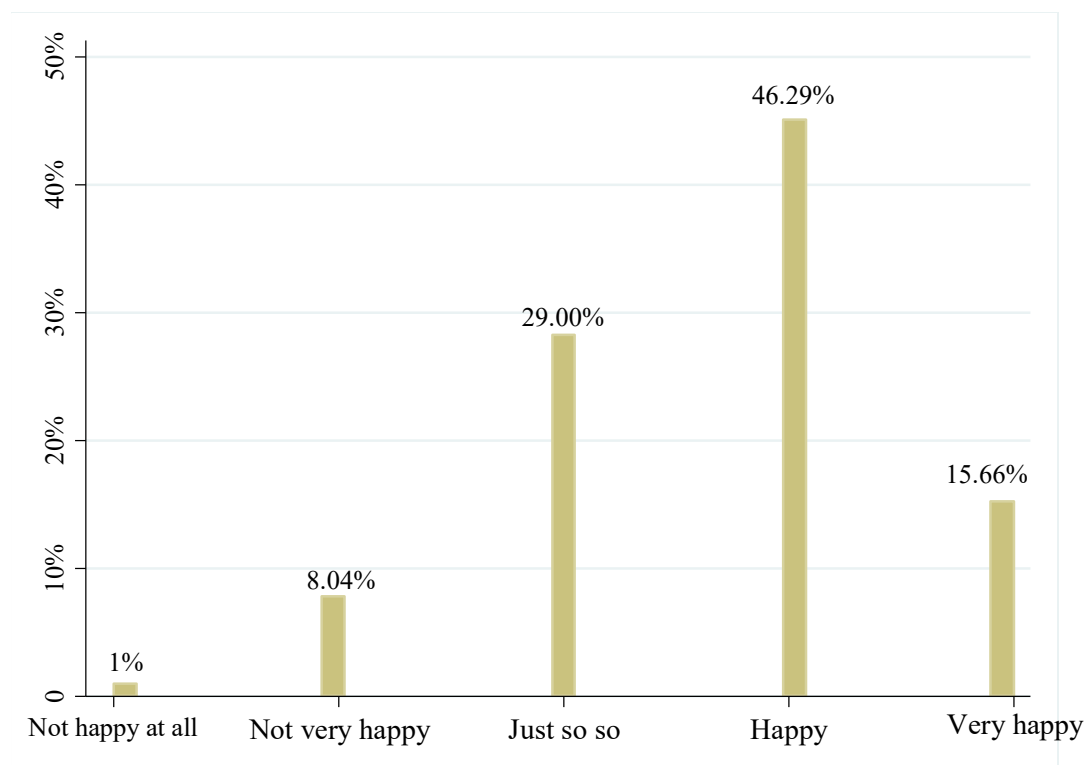


Figure 2. Distribution of the Subjective Well-Being of Villagers

Source: CHIP-2002.

Table 1. Comparison of the Different Nomination Methods in Elections

Nomination Methods	Competitiveness of Elections	Villagers' Participation in Elections	Satisfaction of Election Outcome	Proportion of Nominated Party Members
Direct nomination by villagers	High	High	High (70%)	Low (30%)
Nomination by the village party branch	Medium	Medium	Medium (44%)	Medium (61%)
Nomination by the township party committee	Low	Low	Low (38%)	High (86%)

Source: Authors' assembled information based on Kennedy (2002).

Table 2. Effects of Village Elections on Happiness of Villagers: OLS Estimations

	(1)	(2)	(3)	(4)
Village elections	-0.068 (0.064)	-0.095 (0.064)	-0.094 (0.067)	-0.062 (0.064)
Direct nomination	0.098* (0.057)	0.094* (0.054)	0.105* (0.054)	0.098** (0.049)
Provincial dummies	Yes	Yes	Yes	Yes
Interviewee partial controls	Yes			
Interviewee full controls		Yes	Yes	Yes
Spouse controls			Yes	Yes
Inter-family and inter-temporal comparison				Yes
Village controls				Yes
Constant	3.620*** (0.172)	2.304*** (0.228)	2.264*** (0.252)	2.941*** (0.243)
No. of Villages	959	959	957	943
Observations	9,060	8,954	8,193	8,066
R ²	0.203	0.239	0.235	0.315

Notes: Standard errors in parentheses are robust to heteroscedasticity and clustered at the village level for all regressions. *, **, and *** denote the significance at the 10%, 5%, and 1% levels, respectively. “Interviewee partial controls” include age, age squared, gender, nationality, and mood on the day of survey. “Interviewee full controls” further include years of education, marital status, health status, political status, whether the interviewee has been or is currently a village cadre, net household income per capita, net household assets, and employment status. “Spouse controls” include number of children and characteristics of the interviewees’ spouses, including political status, whether they have been or are currently cadres, years of education, health status, and employment status. “Inter-family and inter-temporal comparison” refer to a series of additional control variables for the purpose of inter-family and inter-temporal comparison (see detailed list of variables in Table A2 in the Online Appendix). Village controls include whether it is a minority area, whether it is in the western region, its distance to the township, per capita net income in 1998 (in thousand *yuan*), total population of the village (in thousand), and whether there is any natural disaster in the survey year. Complete regression results are presented in Table A3.

Table 3. Effects of Village Elections on Happiness of Villagers: IV Estimations

	(1)	(2)	(3)	(4)
Panel A: 2SLS (DV: happiness)				
Village elections	-2.1430 (1.3305)	-1.0311 (0.9629)	-0.9033 (0.9421)	-1.6320 (1.1806)
Direct nomination	1.6030* (0.9385)	1.2908* (0.7449)	1.0630 (0.6685)	1.4992* (0.8793)
Wild Bootstrap p-value	[0.024]	[0.019]	[0.041]	[0.021]
Cragg–Donald F Statistic	14.764	16.253	13.643	10.829
Hansen J Statistic (p-value)	0.161	0.383	0.382	0.337
R ²	-0.1664	0.0788	0.1244	0.0413
Panel B: First Stage (DV: village elections)				
Secretary_years in office	0.0014 (0.0010)	0.0013 (0.0010)	0.0016* (0.0009)	0.0015 (0.0009)
Mountain area	0.0477** (0.0197)	0.0529*** (0.0196)	0.0523*** (0.0196)	0.0544*** (0.0202)
Proportion of top 5 surnames>50%	0.0018 (0.0182)	0.0022 (0.0180)	-0.0010 (0.0179)	0.0014 (0.0177)
R ²	0.0489	0.0543	0.0553	0.0712
Panel C: First Stage (DV: direct nomination)				
Secretary_years in office	0.002*** (0.0005)	0.0023 (0.0015)	0.0026* (0.0015)	0.0024 (0.0015)
Mountain area	0.043*** (0.009)	0.0438* (0.0258)	0.0474* (0.0262)	0.0555** (0.0275)
Proportion of top 5 surnames>50%	-0.048*** (0.007)	-0.0479** (0.0210)	-0.0529** (0.0209)	-0.0452** (0.0212)
R ²	0.0617	0.0633	0.0689	0.0757
Provincial dummies	Yes	Yes	Yes	Yes
Interviewee partial controls	Yes			
Interviewee full controls		Yes	Yes	Yes
Spouse controls			Yes	Yes
Inter-family and inter-temporal comparison				Yes
Village controls				Yes
No. of Villages	954	954	952	941
Observations	9015	8909	8155	8055

Notes: Standard errors in parentheses are robust to heteroscedasticity and clustered at village level for all regressions. *, **, and *** denote the significance at the 10%, 5%, and 1% levels, respectively. Complete regression results are presented in Table A3.

Table 4. Effects of Village Elections on Local Accountability: Quality, Effort, and Performance of Village Head

	Head Education	Reporting Efforts	Tax and Fee Cut	Gross Tax and Fee Rate (Tobit)	Participate in Rural Pension	Tap Water Ratio	Public Goods Expenditure	Administration Fee
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Village elections	-0.180 (0.303)	-0.017 (0.079)	0.047 (0.073)	0.002 (0.005)	-0.010 (0.039)	0.046 (0.063)	-0.043 (0.197)	0.025 (0.197)
Direct nomination	0.652*** (0.229)	0.117** (0.057)	0.151*** (0.053)	-0.009** (0.005)	0.071*** (0.019)	0.090* (0.053)	0.318* (0.191)	0.180 (0.143)
Minority area	-0.294 (0.287)	-0.035 (0.101)	0.059 (0.059)	-0.006 (0.006)	0.017 (0.031)	0.041 (0.091)	-0.119 (0.250)	-0.217* (0.129)
Distance to town	0.010 (0.011)	-0.006* (0.003)	0.000 (0.003)	0.000 (0.000)	0.001 (0.001)	-0.000 (0.003)	-0.017** (0.007)	-0.006 (0.006)
Income per capita of 1998	0.322*** (0.085)	0.032 (0.028)	-0.010 (0.015)	-0.002* (0.001)	0.020* (0.011)	0.083*** (0.022)	0.464*** (0.107)	0.322*** (0.095)
Population	0.286*** (0.072)	0.066*** (0.019)	0.002 (0.018)	-0.002 (0.001)	0.031*** (0.012)	0.023 (0.015)	-0.008 (0.050)	-0.094** (0.038)
Disaster	0.068 (0.162)	-0.030 (0.048)	0.417*** (0.041)	-0.005* (0.003)	0.033 (0.022)	0.030 (0.040)	0.016 (0.122)	-0.017 (0.088)
Province dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	942	946	894	946	943	946	946	946
R ²	0.106	0.121	0.222	NA	0.071	0.301	0.362	0.288

Notes: Standard errors in parentheses are robust to heteroscedasticity and clustered at the county level for all regressions. *, **, and *** denote the significance at the 10%, 5%, and 1% levels, respectively. See Tables A1 and A2 of the Online Appendix for variable definitions. Column 4 reports the marginal effects of Tobit regressions, and OLS results are similar. All other columns report OLS results. The results in Columns 3 and 5 are qualitatively similar when we use probit regressions. Column 8 serves as a placebo test.

Online Appendix I: Additional Tables

Table A1. Comparison of Village Characteristics with and without Village Elections or Direct Nomination

Variables	Village with Direct Nomination	Village without Direct Nomination	Diff. (s.e.)	Village with Elections	Village without Elections	Diff. (s.e.)
Minority area	0.157	0.135	0.023 (0.038)	0.151	0.213	-0.062 (0.048)
Distance to town	4.914	5.441	-0.527 (0.601)	5.049	3.800	1.249 (0.764)
Western region	0.298	0.279	0.019 (0.047)	0.293	0.361	-0.068 (0.060)
Income per capita in 1998 (thousand <i>yuan</i>)	2.045	2.121	-0.077 (0.091)	2.032	2.169	-0.137 (0.097)
Population (thousand)	1.845	1.534	0.311** (0.122)	1.822	1.639	0.184 (0.160)
Disaster	0.491	0.621	-0.130** (0.052)	0.498	0.623	-0.125* (0.066)
Obs	854	104		897	61	

Note: Village characteristics include whether it is in a minority area, whether it is in the western region, its distance to the township, per capita net income (thousand *yuan*), total population of the village, and whether there is any natural disaster in the survey year. *, **, and *** denote the significance at the 10%, 5%, and 1% levels, respectively. In all later regressions, we control for provincial dummies, which fully absorb the dummy of western region, so the western dummy is dropped in regressions.

Table A2. Variable Definition and Summary Statistics

Variable	Definition	Mean	Std. Dev.
<i>Individual-level outcome</i>			
Happiness	Subjective well-being reported by the interviewees (1–5)	3.67	0.87
<i>Village-level outcome</i>			
Village head education	Years of schooling of the village head	10.06	2.15
Village head effort	Log (1+The times that the village head reports village problems to the township government and seeks its help)	1.31	0.63
Tax and fee cut	Equals 1 if households in the villiage enjoy the tax and fee cut; 0, otherwise	0.357	0.479
Gross tax and fee rate (0–1)	Sum of taxes and fees (incl. fines) paid by survey households/Sum of household incomes of survey households	0.037	0.034
Participate in rural pension	Equals 1 if the villiage participates in rural pension systems; 0, otherwise	0.069	0.253
Tap water ratio	Proportion of households in the village with access to tap water	0.353	0.450
Per capita public good	Log (1+Expenditure per capita on production service, education, medical care, infrastructure, and public welfare)	2.66	1.73
Per capita admin expenditure	Log (1+Administrative expenditure per capita)	1.19	1.24
<i>Village democracy</i>			
Village election	Equals 1 if village elections have been implemented by 2002; 0, otherwise	0.94	0.24
Direct nomination	Equals 1 if village committee members were directly nominated by villagers; 0, otherwise	0.88	0.31
<i>Interviewee controls</i>			
Age	Age of the interviewee	45.35	10.69
Male	Equals 1 if the interviewee is male; 0, if female	0.75	0.43
Minority	Equals 1 if the interviewee is of minor nationality; 0, otherwise	0.12	0.33
Mood	Equals 1 if the interviewee reports his or her mood status on the day of survey as “very good”; 0, otherwise	0.65	0.48
Married	Equals 1 if the interviewee is married; 0, otherwise	0.95	0.21
CCP	Equals 1 if the interviewee is a member of China’s Communist Party; 0, otherwise	0.16	0.37
Cadre_now	Equals 1 if the interviewee is currently a village cadre; 0, otherwise	0.16	0.37
Cadre_past	Equals 1 if the interviewee was a village cadre; 0, otherwise	0.21	0.41
Edu	Years of schooling of the interviewee	8.07	2.92

Number of children	Number of children of the interviewee	1.67	0.10
Health	Equals 1 if the interviewee reports his/her health status as “very healthy” or “healthy”; 0, otherwise	0.80	0.40
Log_houincpc	Logarithm of household net income per capita	7.70	0.69
Net wealth	Household net asset (in thousand <i>yuan</i>)	37.58	41.43
Working hours	Average daily primary job (non-agricultural) working hours	3.48	4.05
Unemployed	Equals 1 if the interviewee is unemployed; 0, otherwise	0.01	0.10
<i>Spouse characteristics</i>			
CCP_spouse	Equals 1 if the interviewee’s spouse is a member of China’s Communist Party; 0, otherwise	0.05	0.21
Cadre_now_spouse	Equals 1 if the interviewee’s spouse is currently a village cadre; 0, otherwise	0.07	0.26
Cadre_past_spouse	Equals 1 if the interviewee’s spouse is a village cadre; 0, otherwise	0.08	0.28
Edu_spouse	Years of schooling of the interviewee’s spouse	6.63	3.46
Health_spouse	Equals 1 if the interviewee’s spouse reports his/her health status as “very healthy” or “healthy”; 0, otherwise	0.78	0.42
Unemployed_spouse	Equals 1 if the interviewee’s spouse is unemployed; 0, otherwise	0.01	0.10
<i>Inter-family and intertemporal comparison</i>			
Much above average	Equals 1 if the income level of household in the village is much above average; 0, otherwise	0.02	0.13
Above average	Equals 1 if the income level of household in the village is above average; 0, otherwise	0.19	0.39
Much below average	Equals 1 if the income level of household in the village is much below average; 0, otherwise	0.03	0.16
Below average	Equals 1 if the income level of household in the village is below average; 0, otherwise	0.20	0.40
Living better	Equals 1 if the interviewee’s life is better compared with five years ago; 0, otherwise	0.61	0.49
Living worse	Equals 1 if the interviewee’s life is worse compared with five years ago; 0, otherwise	0.05	0.22
Income big increase	Equals 1 if the interviewee expects his or her household’s income to increase greatly in the next five years; 0, otherwise	0.10	0.29
Income small increase	Equals 1 if the interviewee expects his or her household’s income to increase slightly in the next five years; 0, otherwise	0.68	0.47
Income decrease	Equals 1 if the interviewee expects his or her household’s income to decrease in the next five years; 0, otherwise	0.04	0.20

Source: CHIP 2002. See Table A1 for the summary statistics of village-level control variables.

**Table A3. Effects of Village Democracy on the Happiness of Villagers:
OLS and 2SLS Full Results**

	OLS				2SLS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Village elections	-0.068 (0.064)	-0.095 (0.064)	-0.094 (0.067)	-0.062 (0.064)	-2.1430 (1.3305)	-1.0311 (0.9629)	-0.9033 (0.9421)	-1.6320 (1.1806)
Direct nomination	0.098* (0.057)	0.094* (0.054)	0.105* (0.054)	0.098** (0.049)	1.6030* (0.9385)	1.2908* (0.7449)	1.0630 (0.6685)	1.4992* (0.8793)
Distance to town				0.001 (0.004)				0.0070 (0.0077)
Minority area				0.059 (0.061)				0.1165 (0.1106)
Income per capita in 1998				0.027 (0.017)				0.0281 (0.0256)
Population				0.003 (0.012)				-0.0146 (0.0219)
Disaster				0.025 (0.029)				-0.0017 (0.0608)
Age	0.003 (0.005)	-0.016*** (0.006)	-0.001 (0.007)	-0.005 (0.007)	-0.0024 (0.0070)	-0.0187** (0.0074)	-0.0016 (0.0085)	-0.0088 (0.0088)
Age ²	-0.000 (0.000)	0.000*** (0.000)	0.000 (0.000)	0.000 (0.000)	0.0001 (0.0001)	0.0002*** (0.0001)	0.0001 (0.0001)	0.0002 (0.0001)
Male	-0.034 (0.023)	-0.047* (0.024)	-0.013 (0.027)	-0.025 (0.026)	-0.0444 (0.0321)	-0.0446 (0.0299)	-0.0209 (0.0323)	-0.0393 (0.0368)
Minority	0.051 (0.054)	0.059 (0.053)	0.068 (0.052)	0.053 (0.058)	0.0772 (0.0871)	0.1035 (0.0695)	0.1021 (0.0650)	0.0355 (0.0943)
Mood	0.611*** (0.025)	0.569*** (0.024)	0.554*** (0.025)	0.394*** (0.024)	0.6394*** (0.0355)	0.5826*** (0.0295)	0.5626*** (0.0277)	0.4257*** (0.0367)
Married		0.275*** (0.051)				0.2814*** (0.0570)		
CCP		0.079*** (0.026)	0.064** (0.027)	0.025 (0.025)		0.0775*** (0.0297)	0.0681** (0.0289)	0.0316 (0.0300)
Cadre_now		-0.021 (0.028)	0.015 (0.030)	-0.015 (0.029)		-0.0320 (0.0345)	0.0029 (0.0341)	-0.0345 (0.0367)
Cadre_past		-0.003 (0.026)	-0.010 (0.027)	-0.001 (0.025)		-0.0094 (0.0296)	-0.0118 (0.0290)	-0.0142 (0.0322)
Education		0.003 (0.004)	-0.002 (0.004)	-0.005 (0.003)		0.0026 (0.0041)	-0.0017 (0.0040)	-0.0038 (0.0043)
Number of children			-0.023** (0.012)	-0.031*** (0.011)			-0.0301** (0.0136)	-0.0408*** (0.0153)
Health		0.232*** (0.026)	0.162*** (0.027)	0.116*** (0.025)		0.2347*** (0.0318)	0.1567*** (0.0342)	0.1237*** (0.0385)
Log_houincpc		0.134*** (0.019)	0.121*** (0.019)	0.046** (0.018)		0.1416*** (0.0249)	0.1283*** (0.0228)	0.0609** (0.0261)
Net wealth		0.002*** (0.000)	0.001*** (0.000)	0.001** (0.000)		0.0015*** (0.0003)	0.0014*** (0.0003)	0.0007* (0.0004)
Working hour		-0.000	-0.001	0.001		-0.0006	-0.0012	0.0008

		(0.003)	(0.003)	(0.003)		(0.0033)	(0.0033)	(0.0037)
Unemployed		-0.098	-0.087	-0.094		-0.1537	-0.1465	-0.1669
		(0.084)	(0.092)	(0.084)		(0.1009)	(0.1075)	(0.1117)
CCP_spouse			-0.008	-0.031			0.0065	-0.0131
			(0.041)	(0.039)			(0.0442)	(0.0469)
Cadre_now_spouse			-0.067	-0.052			-0.0544	-0.0305
			(0.043)	(0.041)			(0.0496)	(0.0532)
Cadre_past_spouse			0.009	-0.012			-0.0079	-0.0315
			(0.040)	(0.037)			(0.0447)	(0.0465)
Education_spouse			0.012***	0.009***			0.0080*	0.0051
			(0.003)	(0.003)			(0.0048)	(0.0054)
Health_spouse			0.120***	0.098***			0.1413***	0.1262***
			(0.026)	(0.024)			(0.0319)	(0.0354)
Unemployed_spouse			-0.154*	-0.152*			-0.1975**	-0.2225**
			(0.087)	(0.089)			(0.0977)	(0.1058)
Much above average				0.228***				0.2708***
				(0.061)				(0.0777)
Above average				0.147***				0.1407***
				(0.025)				(0.0322)
Much below average				-0.791***				-0.7403***
				(0.067)				(0.0830)
Below average				-0.273***				-0.2552***
				(0.028)				(0.0374)
Living better				0.226***				0.2091***
				(0.025)				(0.0332)
Living worse				-0.152***				-0.0822
				(0.053)				(0.0761)
Income big increase				0.210***				0.2091***
				(0.038)				(0.0515)
Income small increase				0.105***				0.1202***
				(0.027)				(0.0369)
Income decrease				-0.075				-0.0535
				(0.050)				(0.0654)
Provincial dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9,060	8,954	8,193	8,066	9,015	8,909	8,155	8,055
R ²	0.203	0.239	0.235	0.315	-0.1664	0.0788	0.1244	0.0413
Cragg-Donald F Statistic					14.764	16.253	13.643	10.829
Hansen J statistic (p-value)					0.161	0.383	0.382	0.337

*Notes: Standard errors in parentheses are robust to heteroscedasticity and clustered at the village level for all regressions. *, **, and *** significance at the 10%, 5%, and 1% levels, respectively.*

**Table A4. Effects of Village Democracy on Villagers' Happiness:
Probit Regressions and Alternative Happiness Coding**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Village elections	-0.070*	-0.085**	-0.087**	-0.074*	-0.068*	-0.084**	-0.087**	-0.072*
	(0.040)	(0.040)	(0.041)	(0.043)	(0.040)	(0.041)	(0.041)	(0.044)
Direct nomination	0.072**	0.068**	0.072**	0.077**	0.070**	0.067**	0.071**	0.076**
	(0.034)	(0.033)	(0.033)	(0.034)	(0.034)	(0.033)	(0.033)	(0.034)
Minority area				-0.000				-0.000
				(0.002)				(0.002)
Distance to town				0.041				0.045
				(0.047)				(0.047)
Income per capita in 1998				0.022*				0.023*
				(0.012)				(0.013)
Population				0.010				0.011
				(0.010)				(0.010)
Disaster				0.006				0.008
				(0.021)				(0.021)
Age	0.003	-0.006*	-0.001	-0.002	0.004	-0.006*	-0.001	-0.002
	(0.003)	(0.004)	(0.005)	(0.005)	(0.003)	(0.004)	(0.005)	(0.005)
Age ²	-0.000	0.000**	0.000	0.000	-0.000	0.000**	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Male	-0.021	-0.031*	-0.014	-0.024	-0.020	-0.031*	-0.013	-0.025
	(0.015)	(0.016)	(0.018)	(0.018)	(0.015)	(0.016)	(0.018)	(0.018)
Minority	0.031	0.040	0.039	0.038	0.033	0.042	0.042	0.040
	(0.034)	(0.034)	(0.035)	(0.042)	(0.034)	(0.034)	(0.035)	(0.042)
Mood	0.348***	0.334***	0.329***	0.259***	0.352***	0.338***	0.334***	0.265***
	(0.014)	(0.014)	(0.015)	(0.016)	(0.014)	(0.014)	(0.015)	(0.016)
Married		0.109***				0.111***		
		(0.028)				(0.028)		
CCP		0.048***	0.041**	0.023		0.051***	0.044**	0.026
		(0.018)	(0.018)	(0.019)		(0.018)	(0.018)	(0.019)
Cadre_now		-0.002	0.015	-0.006		-0.006	0.013	-0.008
		(0.019)	(0.020)	(0.021)		(0.019)	(0.020)	(0.021)
Cadre_past		-0.001	-0.009	-0.000		-0.000	-0.009	0.000
		(0.017)	(0.018)	(0.018)		(0.017)	(0.018)	(0.018)
Education		0.002	0.001	-0.001		0.002	0.000	-0.001
		(0.002)	(0.002)	(0.002)		(0.002)	(0.002)	(0.002)
Number of children			-0.009	-0.015*			-0.010	-0.016*
			(0.008)	(0.008)			(0.008)	(0.008)
Health		0.129***	0.090***	0.074***		0.128***	0.089***	0.072***
		(0.017)	(0.019)	(0.019)		(0.017)	(0.019)	(0.019)
Log_houincpc		0.080***	0.074***	0.035***				
		(0.012)	(0.012)	(0.012)				
Net wealth		0.001***	0.001***	0.001**		0.082***	0.076***	0.037***
		(0.000)	(0.000)	(0.000)		(0.012)	(0.012)	(0.012)
Working hour		0.000	0.000	0.000		0.001***	0.001***	0.001**
		(0.002)	(0.002)	(0.002)		(0.000)	(0.000)	(0.000)

Unemployed	-0.015 (0.051)	0.005 (0.059)	0.004 (0.056)	0.001 (0.002)	0.000 (0.002)	0.001 (0.002)		
CCP_spouse		0.002 (0.031)	-0.010 (0.032)		-0.031 (0.051)	-0.009 (0.059)	-0.014 (0.057)	
Cadre_now_souse		-0.023 (0.032)	-0.016 (0.033)			-0.002 (0.031)	-0.013 (0.033)	
Cadre_past_spouse		0.011 (0.028)	-0.004 (0.029)			-0.025 (0.032)	-0.020 (0.033)	
Education_spouse		0.004 (0.002)	0.003 (0.003)			0.013 (0.028)	-0.005 (0.029)	
Health_spouse		0.068*** (0.018)	0.057*** (0.018)			0.004* (0.002)	0.004 (0.003)	
Unemployed_spouse		-0.105 (0.064)	-0.115* (0.069)			0.069*** (0.018)	0.058*** (0.018)	
Much above average			0.125*** (0.046)			-0.114* (0.064)	-0.127* (0.068)	
Above average			0.128*** (0.017)				0.129*** (0.047)	
Much below average			-0.324*** (0.044)				0.125*** (0.018)	
Below average			-0.133*** (0.019)				-0.321*** (0.044)	
Living better			0.132*** (0.018)				-0.134*** (0.019)	
Living worse			-0.052 (0.033)				0.131*** (0.018)	
Income big increase			0.124*** (0.025)				-0.051 (0.033)	
Income small increase			0.061*** (0.019)				0.123*** (0.025)	
Income decrease			-0.016 (0.034)				0.058*** (0.019)	
Provincial dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9,060	8,954	8,193	8,066	9,144	9,037	8,270	8,139
(Pseudo)R ²	0.1427	0.1688	0.1686	0.2146	0.1449	0.1716	0.1717	0.2166

Notes: Robust standard errors in parentheses are clustered at the village level. *, **, and *** significance at the 10%, 5%, and 1% levels, respectively. Marginal effects are reported. Columns 1–4: happiness = 1 for answers of “very happy” and “happy;” = 0 for “just so-so,” “not very happy,” and “not happy at all”; Columns 5–8 code happiness in a similar way as Column 1–4, excepting coding happiness as 0 (rather than missing) for answer of “don’t know.”

**Table A5. Effects of Village Democracy on the Happiness of Villagers:
Multi-level Modelling**

VARIABLES	(1) happy	(2) happy	(3) happy	(4) happy
Village elections	-0.056 (0.065)	-0.088 (0.064)	-0.100 (0.065)	-0.060 (0.062)
Direct nomination	0.088* (0.051)	0.084* (0.050)	0.096* (0.050)	0.089* (0.048)
Minority area				0.002 (0.003)
Distance to town				0.056 (0.066)
Income per capita in 1998				0.026* (0.015)
Population				0.002 (0.013)
Disaster				0.025 (0.030)
Age	0.003 (0.005)	-0.015*** (0.005)	-0.000 (0.006)	-0.005 (0.006)
Age ²	-0.000 (0.000)	0.000*** (0.000)	0.000 (0.000)	0.000 (0.000)
Male	-0.010 (0.019)	-0.039* (0.020)	0.003 (0.022)	-0.001 (0.021)
Minority	0.077* (0.046)	0.089** (0.045)	0.090** (0.045)	0.084 (0.052)
Mood	0.559*** (0.017)	0.516*** (0.017)	0.500*** (0.018)	0.350*** (0.018)
Married		0.281*** (0.036)		
CCP		0.069*** (0.023)	0.057** (0.024)	0.023 (0.023)
Cadre_now		-0.030 (0.025)	-0.004 (0.026)	-0.028 (0.025)
Cadre_past		0.032 (0.023)	0.025 (0.023)	0.025 (0.022)
Education		0.005* (0.003)	0.001 (0.003)	-0.002 (0.003)
Number of children			-0.019* (0.010)	-0.021** (0.009)
Health		0.197*** (0.020)	0.144*** (0.023)	0.100*** (0.022)
Log_houincpc		0.134*** (0.014)	0.124*** (0.015)	0.044*** (0.014)
Net wealth		0.002*** (0.000)	0.001*** (0.000)	0.001** (0.000)
Working hour		0.002 (0.002)	0.000 (0.002)	0.001 (0.002)
Unemployed		-0.067 (0.081)	-0.096 (0.086)	-0.091 (0.082)
CCP_spouse			0.037 (0.039)	0.016 (0.037)
Cadre_now_spouse			-0.056 (0.039)	-0.037 (0.037)
Cadre_past_spouse			0.002 (0.035)	-0.010 (0.033)
Education_spouse			0.011***	0.009***

			(0.003)	(0.003)
Health_spouse			0.110***	0.089***
			(0.022)	(0.021)
Unemployed_spouse			-0.067	-0.074
			(0.075)	(0.071)
Much above average				0.224***
				(0.058)
Above average				0.171***
				(0.020)
Much below average				-0.751***
				(0.049)
Below average				-0.282***
				(0.020)
Living better				0.206***
				(0.018)
Living worse				-0.143***
				(0.037)
Income big increase				0.137***
				(0.032)
Income small increase				0.063***
				(0.021)
Income decrease				-0.065
				(0.040)
Constant	3.635***	2.288***	2.228***	3.025***
	(0.166)	(0.197)	(0.218)	(0.216)
Observations	9,060	8,954	8,193	8,066
Number of groups	959	959	957	943

Notes: Villages are at the higher level (level-2) and individuals are at the lower level (level-1). We allow heterogenous levels (“intercepts”) of villagers’ happiness across villages, heterogenous effects (“slopes”) of election and nomination methods, as well as non-zero covariance (“unstructured covariance”) among these three parameters. The results are similar to those in Table 2 with OLS regressions clustered at the village level. *, **, and *** significance at the 10%, 5%, and 1% levels, respectively.

**Table A6. Heterogeneous Effects of Village Elections on Happiness:
OLS Estimations**

	Live Outside	Not Live Outside	Cadre	Not Cadre
	(1)	(2)	(3)	(4)
Village elections	-0.142 (0.151)	-0.054 (0.063)	-0.122 (0.097)	-0.045 (0.068)
Direct nomination	0.008 (0.103)	0.115** (0.052)	0.083 (0.079)	0.101* (0.052)
Province dummies	Yes	Yes	Yes	Yes
Interviewee full controls	Yes	Yes	Yes	Yes
Spouse controls	Yes	Yes	Yes	Yes
Inter-family and inter-temporal comparison	Yes	Yes	Yes	Yes
Village controls	Yes	Yes	Yes	Yes
Observations	1,050	7,025	1,298	6,787
(Pseudo) R ²	0.320	0.322	0.309	0.321

Notes: Standard errors in parentheses are robust to heteroscedasticity and clustered at the village level for all regressions. *, **, and *** denote the significance at the 10%, 5%, and 1% levels, respectively. Columns 1 and 2 distinguish whether the individual lived outside the town for more than one year. Columns 3 and 4 separate current village cadres and other villagers. See Column 4 of Table A3 for the list of control variables, excepting that in Columns 3 and 4 we do not control for current cadre status.

Online Appendix II: Heterogeneous Effects as Placebo Tests

Similar to market competitions, electoral competitions may reduce political rents (Stigler, 1972; Shepsle, 2001). In their experiment, Beath et al. (2017) found that public projects (e.g., roads, drinking water, etc.) decided by direct democracy are located further away from the houses of the village headmen. Therefore, we hypothesize that the impact of village democracy on subjective well-being may be heterogeneous depending on the villagers' position (i.e., village cadre or non-cadre). The subjective well-being of cadres may not improve owing to lower political rents, whereas non-cadre villagers may benefit from better governance performance.

Moreover, rural elections only determine the village-level leaders, thus affecting governance performance within the villages. That is, the impact is very limited outside the villages. Therefore, we hypothesize that the impact of rural elections on villagers is related to the villager-village connection: the closer the connection between villagers and village, the more benefits they will gain from village democracy.

In sum, we formulate another hypothesis for heterogeneity analysis:

Hypothesis 3: *The impact of village democracy in rural China on villagers' subjective well-being is heterogeneous between (1) cadres and non-cadres and (2) villagers living locally and living outside.*

Thus, we separate whether the individual lived outside the town, and whether the individual is a cadre or not. We report the heterogeneous effects in Table A6. The results show that direct nomination only significantly improves the happiness of the non-cadres villagers and those living locally but not that of the cadres and those ever living outside.

Online Appendix III: Rationale and Validity for Selected Instrumental Variables

The instruments we use are as follows: (1) whether the village is in mountain areas, (2) number of years of the current village party secretary in office, and (3) whether the proportion of households with the five most popular surnames in the village is above 50%.

Mountain areas are strongly correlated with rural democracy in China. As O'Brien and Li (2000) proposed, grassroots democracy has been practiced in some remote (mountainous) villages even before the Organic Law was drafted. This is so because giving priority to promoting elections in remote rather than prosperous villages is beneficial to political stability, which is a critical target for local officials (Epstein, 1996; Birney, 2014). More specifically, in the event of losing control of election (such as an unexpected/uncontrolled candidate being elected) in remote villages, it would not seriously harm the interest of township officials; however, these officials would benefit from village economic development if elections do boost economic development and alleviate poverty (Lawrence, 1994). Since direct nomination of village leaders increases the competitiveness and uncertainty of election results, it adds to the potential risk of political stability involving in village elections, implying a correlation between direct nomination and mountainous area as well.

The rationales for using “number of years of the current village party secretary in office” as an instrument are as follows. On the one hand, when the village party secretary has been in the position for long, then the township government and villagers

may face higher incentives to keep a balance of village power by introducing competitive elections and villager nominations for the village head, given that both the party secretary and village head take roles in village decision making (Zhang et al., 2004). On the other hand, the longer the tenure of the party secretary, the more consolidated power he/she may have, the less threat to his/her power will a new village head brings, thus the more likely that the party secretary will accept competitive elections and villager nominations for the village head. O'Brien and Han (2009) found that in early 2000s, villager election committees in many provinces were more likely to be chaired by the party secretary rather than the village head.

Whether the proportion of households with the five largest surnames of the village exceeds 50% is taken as an instrument based on the important influence of clan force in China's rural politics and village democracy (Zhang et al., 2004; Shen & Yao, 2008). In particular, households with the same surname are assumed to belong to the same clan with common interests. If the villagers' surnames are scattered, then the struggle for interests of villagers will become markedly intense and the demand for elections will be high. If the proportion of a single surname is high, then the demand for elections will be reduced because the villagers have common interests from the beginning. Since direct nomination allows more candidates from different clans to participate the election, it becomes more common when surnames are scattered. Therefore, following Zhang et al. (2004), Gan et al. (2006; 2012), and Shen and Yao (2008), we use village surname composition as an instrumental variable for rural election and direct nomination.

The validity of instrumental variables requires the satisfaction of the exclusion

restriction condition, which means that the aforementioned three instrumental variables should not affect happiness through other channels rather than elections. Indeed, the existing literature seems to provide sufficient evidence on this—as suggested by Knight et al. (2009), after adjusting for income, living in mountainous area does not significantly affect happiness in rural China; additionally, the effects of clan and village power structure on happiness in rural China are also found to be highly contingent on individual-level variables (e.g., gender) and village-level variables (e.g., economic development) (Liu et al., 2021). Thus, conditional on a rich set of individual-level, family-level, and village-level control variables in our specifications, the selected instruments tend to satisfy the exclusion restriction condition.

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