Controversial Expropriation: The Effect of Land Compensation Changes on Civil Unrest in China

Shukang Xiao *

Job Market Paper

Department of Economics, University of Calgary

October, 2023

Abstract

Land expropriation is widely used by governments in developing countries to boost economic growth, but it also comes at the cost of creating discontent among the population if people do not feel adequately compensated. Using staggered changes in land compensation across provinces in China, I test how increased compensation affects land conflicts using difference-in-differences method. Perhaps counter-intuitively, I find that an increase in compensation leads to a 10% increase in land conflicts. Subsequent investigation uncovers that the increase in land conflicts is primarily driven by the unequal increase in compensation across regions, though the overall increase in compensation mitigates grievances to some extent. The results do not seem to be explained by the economic incentives of governments, individuals, and companies to minimize costs in seeking to obtain land. The results highlight the need for progressive changes in compensation to reduce conflict around land-transfer programs.

Keyword: land expropriation; land reform; compensation; conflict; civil unrest

JEL code: Q15; O18; D74; H13

1 Introduction

Land expropriation is widely used by governments both in developing countries, like China, Ethiopia and Indonesia (Ito et al., 2014) and in developed countries, such as the US (eminent domain or regu-

*Address: 2500 University Drive NW, Calgary, AB T2N 1N4, Canada, telephone: +18259862719, email: shukang.xiao@ucalgary.ca. I thank Benjamin Crost, Stefan Staubli, Arvind Magesan, Eli Berman, Leonard Goff and Alexander Whalley for valuable comments and guidance. I am responsible for any remaining errors.

latory takings), United Kingdom, New Zealand and Ireland (compulsory purchase) (Chen and Susan, 2020). Land expropriation offers benefits in terms of economic growth because it lowers transaction costs for investors and facilitates large-scale investments that may not have otherwise occurred. However, in these countries, the demand for land driven by infrastructure building, real estate projects and other development projects often leads to forced evictions. As a result, government-sponsored land expropriation is a source of considerable tensions between the state and society. Extensive evidence suggests that land expropriation can trigger conflicts between the government and local communities, especially when compensation is perceived as inadequate or unfair (Sha, 2023; Cui, Ernan, et al., 2015; Zhao and Xie 2022). Ensuring fair compensation becomes paramount for minimizing potential conflicts and maintaining social stability.

This paper provides evidence on how the change in compensation for land expropriation affects conflict in China, a country with by far the most expropriations in the world. In the last two decades, China has experienced rapid urban expansion. From 2000 to 2017, the urban population grew from 37.66% to 60.24%, leading to a significant rise in urban land demand and a substantial increase in land expropriation from farmers[1]. Figure 1 shows that after 2010, the annual area of land expropriation exceeded 6.49 million Mu[2] and massive populations lost their farmland every year. The "Blue Book of Society 2013", released by the Chinese Academy of Social Science in 2012, pointed out that there were tens of thousands or even over a hundred thousand mass incidents annually and about half of the incidents were triggered by land acquisition and demolition.

The Chinese government has implemented gradual increases in compensation over time to ensure that compensation keeps up with rising property prices, in the hope that fair compensation will mitigate conflicts between communities and the local government. The provincial government periodically announces a new compensation standard, which usually stays in place for several years, until it is replaced with a new standard. Due to China's rapid economic growth after 2000, the compensation standards to experience significant increases with the introduction of a new standard. For example, in September 2015, a new compensation standard in Jiangxi Province resulted in a 30% increase in compensation per hectare of expropriated land compared to the old standard introduced in March 2011. The timing of a new compensation policy varies significantly among provinces in China, provid-

[1]Due to political reasons, the rural land in China is collectively owned by rural communities and cannot be directly used for urban activities. Only after being expropriated by the government, the rural land can be converted into state-owned land and used for urban construction.

[2]Mu is a measure unit of area, and one Mu is around 0.1647 acre. The national Bureau of Statistics indicates that the cultivated area per capita in rural China is 2.28 Mu in 2010. If all the expropriated land was cultivated land, then there were over 2.846 million of population losing their land in the urbanization each year after 2010. The number of people losing land reached its peak at 4.79 million in 2013.

ing an opportunity to estimate the causal effect of this policy. I exploit the large and discrete changes in compensation created by the introduction of new compensation standards to estimate the effect of land compensation on conflict.

In this study, I adopt a staggered difference-in-differences approach to estimate the causal effect of significant changes in compensation for land expropriation on conflicts during the period from 2010 to 2017. To measure conflicts, I utilize the "CASM-China" dataset developed by Zhang and Jennifer (2019). This dataset compiles information on collective actions throughout China from Weibo, one of the largest Chinese social media platforms. The dataset covers a wide range of collective action events from 2010 to 2017 and records basic information about the collective actions, including the location (at the county level), time (at the daily level) and the theme. Perhaps counter-intuitively, the analysis reveals that, following an increase in compensation standards, there is a 0.628% increase in the likelihood of land conflicts at the county-month level, which corresponds to a rise about 10% relative to the sample mean of 6.405%. By using the event study estimation method, I find a parallel trend between the control group and treated group before the policy, which bolsters the validity of the model. The valid identification using difference-in-differences model relies on the assumption that the timing of new compensation standards is uncorrelated with unobserved shocks to conflict. To ensure the robustness of my results, I perform a series of checks: 1) I use alternative time windows to perform the analysis. 2) I do not find the previous conflict level affects the timing of a new compensation policy, suggesting that the policy is plausibly exogenous.3) Since the implementation of new compensation standards occurred at the provincial level, the turnover of provincial governors may affect the timing of the policy and the conflict level at the same time. I examine how provincial governors' characteristics affect the timing of the policy but do not find any significant effects of the age, education level, major, and tenure of provincial governors on the timing of the compensation policy. I control for political governors' characteristics and find a consistent estimate with the baseline results. 4) I account for the influence of province specific fiscal cycles or seasonal employment types across different months by introducing the interactive term of province fixed effects and month fixed effects. 5) I examine the effect of the anti-corruption campaign that took place after 2013, addressing concerns about its potential political impact on the estimates. 6) I control for the scale of internet users at the prefecture level to alleviate any potential bias associated with the changing internet coverage. 7) I test the robustness by using a refined definition of land conflict. 8) I apply the estimation method proposed by Borusyak et al. (2023) and Gardner (2022) to mitigate the potential bias in the staggered difference-in-differences design. 9) Finally, falsification tests by randomizing the timing of the compensation standards for land conflicts support the validity of my main results. After conducting these various robustness checks, the estimated treatment effect remains consistent, reinforcing the validity and reliability of my findings.

Next, I explore possible mechanisms through which changing compensation standards may affect conflict. First, if people protest just because the compensation is too low compared with the property price, an increase in compensation could reduce the conflict as people get higher compensation from land expropriation. Second, the increase in compensation may lead to more conflict, as people whose land is expropriated before the policy may become upset when they discover that their compensation is significantly lower than their neighbors whose land is expropriated after the policy. This type of behavior has also been extensively observed in other business activities, such as the protests by Tesla owners for the price cuts that occurred shortly after they had bought a Tesla[3]. Finally, raising compensation may trigger more conflicts when the magnitudes of compensation standards changes are unequal in adjacent regions. These three possible mechanisms suggest that the effect of a higher compensation standard on conflict is unclear.

To test the possible mechanisms, I collect detailed compensation information for more than 1300 counties from various government websites and calculate how new compensation standard policies affect both the mean and variance of compensation in each county. I find that mean compensation price increases by about 30% after a new standard is introduced, and in more than 60% of the counties, the level of compensation inequality become higher after the policy. I then conduct two heterogeneous tests by examining how the mean increase in compensation, and the variance increase in compensation affect conflict. I find that conflict could be mitigated by the higher compensation level. For every 10 thousand Yuan per Mu increase in compensation, conflict would be reduced by 0.935% (about 14.3% of the sample mean) at the county-moth level. However, the increasing inequality in compensation may fuel conflicts. Compared to counties with a negative or zero change in inequality level, counties with an increasing compensation inequality have a 1.292% higher conflict probability (about 20.66% of the sample mean) at the county-month level.

I also explore whether the increase in land conflicts can be explained by alternative reasons. The first alternative explanation might be that the increase in land conflicts may be simply caused by more land expropriation after the policy because the government may want to expropriate and sell more land to generate income. However, after controlling for the area of current land transactions and the area of land transactions within the last six months, the effect of the policy remains. The second alternative explanation might be that the increase in conflicts is driven by the illegal behaviors of the local governments in land expropriation, as rising compensation may increase the fiscal burden of local governments. However, I find that in regions with a high fiscal pressure, the impact of the policy on conflict is not significantly higher than in regions with a low fiscal pressure, which indicates that the economic incentive is not sufficient to lead to illegal behaviors by the local government. Third, since in

[3]Tesla owners in China are furious over price cuts — here's why protests became the answer - The Verge

the protest data, I cannot differentiate whether the conflict occurs between the government and local communities or not. If conflicts arise between farmers and individuals or companies seeking to obtain land in land expropriation, and these conflicts increase after the policy due to the rising cost of land, then my estimate may capture the increase in conflicts between farmers and individuals or companies who attempt to minimize the cost of land (private conflict). But I do not believe this channel plays a significant role, as I have found a negative effect of the increase in compensation before. Besides, the compensation to farmers accounts for only a very small portion (sometimes only 2%) of the market value of the land. The effect of the change in compensation on the market value or the cost of land is minimal.

Finally, I conduct placebo tests that examine the effect of compensation standards on other types of conflict, such as wage, medical and home ownership conflicts. These tests do not find any evidence that compensation standards affected non-land conflicts. I also examine whether people turn to the judicial system for help when they are treated unfairly. Using administrative lawsuit cases concerning land expropriation throughout China from 2014 to 2019, I do not find that people turn to the legal system even when the conflict between local communities and the government significantly increases. This is consistent with the traditional view of the lack of judicial independence in China and the low level of trust in the judicial system when dealing with issues involving the government (Cao et al., 2023).

To my knowledge, this study is the first to provide evidence that compensation for land expropriation can affect conflict in developing countries. This study contributes to the literature on the relationship between land reform and social unrest. Previous research has highlighted the importance of land scarcity and unequal land access as driving factors of conflict. Land reform, particularly land redistribution, has been recognized as a key tool to address land inequality and alleviate rural grievances (Huntington 1968; Albertus 2020; Jaimovich et al., 2021). However, there is another aspect of land reform that has received less attention, involving the government expropriating land from farmers for public and business purposes. The impact of this type of land reform on civil unrest has not been thoroughly explored. A recent study by Sha (2023) reveals that an additional land expropriation increases the incidence of individual's' conflicts with local officials. My study builds upon this existing literature by demonstrating that the government's attempt to address rural grievances through increased compensation for land expropriation may have unintended and unfavorable consequences. I provide evidence that individuals perceive unfairness when they receive lower compensation compared to others in their vicinity. This aspect adds a novel perspective to the understanding of the relationship between land reform and social unrest, emphasizing the significance of relative compensation and perceived inequity in driving conflict dynamics. My results are consistent with Huntington (1968), Finkel

et al. (2015) and Jaimovich et al. (2021), who find land reform may create local grievances and raise expectations among excluded groups even as it addresses long-standing grievances.

More generally, this study contributes to the existing literature on inequality and conflict. The causes of conflicts vary greatly, including ethnic division (Esteban, Joan, and Debraj 1999; Esteban et al., 2012; Caselli, Francesco, and Wilbur 2013; Sambanis, Nicholas, and Moses 2013), individual incentive (Bazzi, Samuel, and Christopher 2014), interpersonal population diversity (Arbatlı et al., 2020), economic shock (Jedwab et al., 2019), natural resources (Adhvaryu et al., 2021), fiscal incentive (Shapiro, Jacob and Oliver 2022), and state capacity (DiGiuseppe, Matthew, and Patrick 2022). There is also a large literature about inequality and conflict (Cederman et al., 2011; Esteban and Debraj 2011; Hillesund, Solveig, et al., 2018; Iacoella et al., 2021; Kołczyńska 2020). For example, Power (2018) find that the perception of unfair economic inequality leads to civil unrest. Existing studies emphasize the role of economic inequality but ignore the effect of unfair public policies, which are quite common in the real world. In my study, I examine the effect of compensation policy on conflict. Since land is the main and sometime the only asset for farmers in rural areas, land expropriation is regarded as a dramatic wealth redistributive policy in China. Therefore, my study contributes to this literature by demonstrating how unfair redistributive policy affects conflict. Therefore, my study has important implications for policy making in redistribution.

This study also provides insights into the political interaction between the citizens and the government (Blattman et al., 2014; Boone 2011; Baldwin 2014). Closely related research by Passarelli and Tabellini (2017) find the government may delay unpleasant choices and accumulate public debt to mitigate social unrest. Fisman et al. (2021) find that non-democratic governments may respond to citizen concerns by reopening during COVID-19 pandemic. Conflicts between the government and local communities arise in land expropriation when people's interests are not well-protected. This is especially true in countries with a weak property rights environment under an authoritarian institution, where people cannot protect their legitimate rights and interests through the judicial system. I find that people choose to protest, instead of turning to the judicial system after being treated unfairly. My study contributes to the literature by focusing on how the local population responds to public policies in authoritarian institutions with a weak property rights environment.

2 Institutional Background

2.1 Property right and land expropriation in China

In rural China, the land is collectively owned by village members, while in urban areas, the government owns all land but grants individuals and companies the land use rights through sale or lease agreements. Due to political reasons, collectively owned land can only be used for agricultural production and cannot be directly transacted for non-agricultural purposes. Instead, the government must expropriate rural land from farmers, convert it into state-owned land, and re-purpose it first. The government then sells the use rights of the state-owned land to individuals and companies.

In the process of rapid urbanization, there is a growing demand for land to support infrastructure development, industrialization, and urban expansion. Individuals and companies can exploit land to build factories, develop housing projects and conduct other business activities. The government may utilize the land for the construction of infrastructure projects, such as roads, parks and water and power supply facilities. More importantly, the local government may establish industry zones to attract investment and promote economic development, thus proactively undertake extensive land requisitions in advance. Restrictions on collectively owned land often result in low economic returns. However, land expropriation changes this, as the collectively owned land used for agricultural production can be repurposed for business or public purposes after expropriation. The government exercises its power to expropriate land from rural farmers for these purposes, offering compensation based on the annual agricultural output value (normally below 30 times), which is significantly lower than the market value when the rural land is converted to state-owned land. For most Chinese farmers, land and the houses built on it are their main or even their only assets. Therefore, the appropriate compensation level for the land is critical in determining people's welfare and behaviors.

2.2 Compensation for expropriation

In the early 2000s, land compensation was traditionally determined based on the agricultural productivity of the land for most provinces. For example, in Sichuan Province, a western agricultural province, the compensation level was 16 times the annual agricultural output for all the land; while in Jiangxi Province, a province in the midlands, the compensation varied from 16 times to 27 times the annual agricultural output. Besides, agricultural productivity varies greatly across regions. However, in the 2000s and 2010s, the overall economic growth rate outpaced the growth rate of agricultural output. This disparity in growth rates across sectors brought about significant challenges and conflicts in relation to land expropriation, and the government recognized the need to strike a balance between the interests of the affected individuals and the broader development goals.

To address this issue and mitigate the land conflict, there has been a paradigm shift in land compensation rule. The new approach emphasizes the inclusion of economic development and property price as crucial factors in determining compensation levels, although the compensation level still falls short of reflecting the actual market value of land. The central government's mandate for regular land compensation adjustments places the responsibility on local governments. Following the guidance of provincial government, the county government decides the level of compensation because it has better information about the local land quality and the local economic condition[4]. The timing of implementing the new compensation levels is left to the discretion of the provincial government, resulting in significant variations in timelines across provinces. This variation in timing provides a valuable opportunity to identify the causal effect of the compensation policy on conflicts. Table 1 presents the timelines for 28 provinces from mainland China adopting new compensation policies from the late 2000s to 2019. It shows that the time to adopt the policy varies greatly. The government introduces regular adjustments to the compensation levels, typically taking place every 3 to 6 years[5]: some provinces only update the compensation policy once, like Jiangsu in 2011 and Yunnan in 2014, while others may update the policy three times, like Fujian and Hunan[6]. Figure 2 shows the number of new compensation policies in each year and each month. Most compensation policies are implemented in the first month of a year. Figure 3 presents the distribution of the policy tenure, suggesting that most provinces adopt a new compensation policy at least 3 years after the previous one, with only a few adopting one after only 2 years.

Along with the rapid economic growth in China in 2000s and 2010s, the compensation increases greatly after each update. For example, the average compensation level in Henan province was 31218 Yuan per Mu in 2009 and became 40609 Yuan per Mu in 2013, with an increase rate of 30%. Table 1 also presents the increase rate of compensation levels across provinces. Although it is the provincial government who announces the compensation policy, the compensation may vary greatly across counties and villages. For example, I present the compensation information for Weidu District in Xuchang city in Table A1, which was implemented from 2009 to 2013. Weidu District is divided into 13 sub-

[4]Due to the concern that the local government may deliberately suppresses land compensation, the provincial government normally has a rough guidance on how much the compensation should increase or the minimum level of compensation in specific regions. For example, Jiangsu provincial government asked the prefecture or county government to make a new compensation in 2011 and the compensation should be no less than 24000 Yuan per Mu, 21000 Yuan per Mu, 18000 Yuan per Mu and 16000 per Mu for four types of land.

[5]A few may take place every two years or more than 7 years.

[6]Xinjiang and Tibet are not included as these two regions have very different social and economic characteristics. Beijing implemented a minimum compensation policy from 2004 and the local government would negotiate with farmers about the compensation level. Therefore, Beijing doesn't have such a compensation update policy like other provinces and will not be discussed in our analysis.

districts and in each sub-district, there may be multiple villages. The compensation varies from 52900 Yuan/Mu to 71400 Yuan/Mu. The compensation may be identical within a county in some areas. For example, the main five districts[7] from Chengdu City, including Jinjiang District, Qingyang District, Jinniu District, Wuhou District and Chenghua District, have a uniform compensation 49040 Yuan/Mu after 2014. As a result, significant variations in compensation levels emerge between land expropriated prior to the implementation of the revised compensation standards and land expropriated thereafter, as well as between adjacent regions under the new compensation policy, even when the two parcels of land shared similar attributes such as location and quality. Higher compensation could mitigate people's discontent in land expropriation. But the discrepancy in compensation levels become a source of discontent among the people whose land has similar location and quality, leading to heightened tensions and conflicts between the government and the local populace.

2.3 Land conflict in China

The issue concerning land is one of the main reasons for collective actions or protests in China. In my study, I use the term "conflicts" to encompass collective actions or protests. This terminology is particularly relevant and appropriate within the context of China. Unlike Western countries where protests are often viewed as a common method of political expression, in China, protests carry significant political sensitivity for local government officials as the collective actions are detrimental to the career development of these officials. When a large group of people collectively experiences the negative impacts of public policies, protests become a significant means for them to fight for their rights. These protests are typically driven by a strong desire to address grievances and obtain justice. Due to the specific political and social landscape in China, where the property rights are weak and formal channels might not always provide satisfactory outcomes, collective actions and protests assume a critical role in advocating for the rights and interests of the affected group. It should be noted that the vast majority of land conflicts happen between the local government and farmers as land expropriation is carried out by local governments (especially county governments).

In many land expropriations in China, people protest as the land compensation is perceived as insufficient or unfair (Sha, 2023; Cui, Ernan, et al., 2015; Zhao and Xie 2022). Offering higher compensation is certainly an effective means to mitigate people's grievances. However, unfair compensation may lead to serious conflicts between local communities and government as individuals don't just compare their own compensation to these who were previously expropriated; they also compare it to the compensation received by their neighbors. The responsive behaviors of local people to the compensation policy have been observed extensively. I describe two stylized cases of the conflict between

[7] "District" and "County" have the same administrative level.

the government and the local people in land expropriation to see how people respond to changes in compensation. To make my cases representative, I choose two cases that happened in around 2010 and in different provinces with different economic development levels.

The first one, which I refer to as the "Tongan Event", occurred on 14th June 2010 in Tongan town, Suzhou city, Jiangsu Province, one of the most economically developed provinces in eastern part of China. After 2003, the Suzhou High-tech Zone initiated land expropriation and relocation for constructing various industrial parks in the subordinate towns and villages. In 2010, a new wave of land expropriation was initiated, and the compensation was more than three times the compensation for land expropriated before 2008. On 14th July 2010, local residents whose land was expropriated before 2008, gathered at the town government office to demand higher compensation for the expropriated land. Most of the gathered people came from Huatong Grden Residential Complex, which is the resettlement housing for farmers from various villages after their land was expropriated. These people were discontented with the significant increase and suspected government officials embezzled and misappropriated the funds that should have been used as compensation to farmers[8]. This collective action even led to some violent conflicts between the government and the local people.

The second one happened in Kunming, the capital city of Yunnan province, on September 9th, 2009[9], just two months after the introduction of the new compensation standard on 1st July 2009. Starting in 2006, Junming High-tech Zone expropriated about 5910 Mu rural land in Ma Jinpu street (a subordinate unit of Chenggong county), resulting a large number of farmers losing their land. Farmers received compensation of 65000 Yuan per Mu. The local population agreed with this compensation. However, the provincial government approved a new compensation level on May 21st, 2009, and the new compensation was implemented after July 1st, 2009. The new compensation was 85000 Yuan per Mu for the land in Pa Jinpu. People in Ma Jinpu whose land was expropriated before July 1st, 2009, become very discontented with the compensation they received. Interestingly, these people didn't request the compensation level of 85 thousand per Mu; instead, they hoped to receive 150000 Yuan per Mu-a compensation standard enjoyed by their neighbors. As in the new compensation policy, some villages nearby from Longcheng township, Dounan township, Wujiaying township and Dayu township can get a compensation of 150 thousand per Mu. As a result, a large-scale protest happened on 9th September 2009. The local leader of Ma Jinpu Street Office indicated that when the land price was 65,000 yuan per mu, the local people had no objections; however, their dissatisfaction began to surface when the compensation price increased to 85000 Yuan per Mu.

These two cases illustrate that the impact of increasing compensation on land conflict may be

[8]https://www.cqwcsy.com/fanwenwang/115677/

[9]http://www.cre.org.cn/qy/fazhan/5276.html

positive.

3 Data and identification strategy

3.1 Data

3.1.1 Conflict Data

In my study, the focal variable is land protest or collective action, which I refer to as "land conflict". For the conflict data, I use the "CASM-China" dataset from Zhang and Jennifer (2019), which collects collective action event information from Chinese largest social media platform-Sina Weibo, and identifies more than 100 thousand collective action events from January 2010 to June 2017. This data records the date of collective actions, the location, and the issues involved, which enables us to explore the geographical and temporal factors that drive these protest events. Given the special attributes of Weibo posts, Zhang (2019) could identify the date when the posts were mad. They consider all posts made within the same county on the same day to be the same event. However, this strategy may suffer from the problem that some collective actions may be posted on several consecutive days. To deal this this problem, I use conflict information at the county-month level, rather than the county-day level. If there is at least one protest in a month within a county, then the conflict level is 1 for that month in that county, otherwise, it is 0. Besides, there may be more than one protest within a day in a county. Therefore, my definition of conflict at county-month level is conservative. There are some protests with prefecture information but without county information. I do not use the prefecture level conflict data as the problem of repeated posts might be even more serious as there are some protests with prefecture information but without county information and these posts may simply record the same protest as these with county information. Besides, the compensation varies greatly across counties within a prefecture and the dis-aggregated information at county level allows us to distinguish how people respond to the compensation policy differently.

The events in the data are labeled according to the issues raised in the protests, such as land, wages, pension, home ownership, healthcare, fraud and so on. Panel A in Figure 4 shows the number of different types of protest in the data. In this study, I focus on the land-related collective actions, specifically events labeled with "Rural/land". In CASM-China data, I can identify 19259 land protests with county information, that exist in 2205 counties. Panel B in Figure 4 presents the trend of land conflict from 2010 to 2017, showing that the number of conflicts increased before 2013 and decreased after 2013. The number of land conflicts in 2010 is small as Weibo just started to become popular in this year. Figure A1 in appendix illustrates the distribution of land conflicts across counties and all

counties had land conflicts lower than 12 months from 2010 to 2017. This suggests that the conflicts are widespread across the country and are not concentrated in a few regions.

There may be other protest datasets, such as the Global Database of Events, Language, and Tone (GDELT), the Integrated Conflict Early Warning System (ICEWS) and WiseNews[10]. However, these datasets of collective action are based on newspaper data and identify a significantly lower number of events due to government limitations on foreign media or constraints on media reporting of collective actions. Compared to other protest data sets, CASM-China identifies more rural, land-related protests and fewer collective action events related to ethnic and religious conflict. This is primarily because foreign media tend to emphasize ethnic and religious conflicts, which are relatively rare on Chinese social media. This suggests that CASM-China is much more suitable for conducting research on land conflict than other datasets.

I acknowledge that there are more collective incidents related to land expropriation in the real world than those identified through social media and other online channels. This implies that my data is subject to underreporting of real events, just like many other conflict data sets. However, collecting comprehensive real-world case data is an extremely challenging task. Collective incidents that are disseminated on the internet have a wider and more influential reach, posing significant challenges to government credibility and policy implementation (Qin, Stromberg, and Wu 2021). Therefore, even though the protests are underreported, it is especially critical to focus on those incidents that are documented on the internet as they provide information with special value about conflicts.

There may be concerns about the potential impact of media censorship in China on the availability and accuracy of this data, as officials may censor social media content to maintain social stability (King et al., 2013). Nevertheless, when it comes to protests primarily centered around economic disputes, such as land expropriation compensation, media censorship may not pose a significant challenge, as the local unrest that I focus on has generally not been targeted for censorship by the Chinese authorities (Qin, Stromberg, and Wu 2017). In China, the central government has shown a degree of encouragement for media coverage of these types of conflicts (Lorentzen 2014). This is because media reporting plays a crucial role in monitoring local governments and ensuring the fair and efficient resolution of disputes. One example is that public appeals to the regulator through social media (Weibo) could substantially reduce violations of pollution standards and pollution emissions (Buntaine Mark, et al., 2022). Having recognized the importance of addressing economic grievances and maintaining social stability, the central government understands that media coverage can serve as a valuable tool for overseeing the actions of local authorities (Cai 2008; Lorenzten 2017). Even when there is certain changes in the degree of media censorship overtime, since my identification exploits the variation of compensation changes

[10]See Cantoni, Davide, et al. (2023) for more information about protest datasets.

across provinces, I could remove the effect of median censorship on my estimates by controlling time fixed effects as the censorship is implemented nationwide.

3.1.2 Compensation policy

The compensation levels in land expropriation are primarily determined and announced by provincial governments, with a few provinces delegating this responsibility to the prefecture governments. I collect data on the timing of implementing the new compensation standard from various governmental websites, as presented in Table 1. The data set reveals significant variations in the timing of adopting the new compensation standards across provinces. These disparities enable us to examine the impact of the compensation changes on conflicts in land expropriation.

I also collect compensation standards from a variety of governmental websites. The dataset provides precise information regarding the monetary amount that the government is obligated to pay to farmers per unit area of land during the land expropriation process.

3.1.3 County level covariates

I use the China County Statistical Yearbook as the primary data source for controlling variables in my study. However, I encounter instances where certain variables were missing in the county-level data. To address this issue and ensure completeness in my analysis, I incorporate data from the China City Statistical Yearbook as a supplementary source. The covariates include GDP per capita (log), GDP share in primary and secondary industries, the fiscal pressure (the fiscal expenditure/fiscal income), and population.

Table 2 presents the description of the main variables. Given the low probability of conflict at county-month level, I have multiplied the conflict dummy variable by 100. The probability of land conflict at the county-month level is 6.405%. The probabilities of conflict about wage, medical issue and home ownership problems are 6.534%, 2.542% and 4.911%, respectively.

3.2 Identification strategy

Since the policy may appear multiple times in a province, I employ a modified Difference-in-Differences model. I compare the probability of conflict in county-policy pairs before and after the policy[11]. The specification controls for county-policy pair fixed effects as well as time fixed effects at month level. Therefore, I estimate the effect of policy using the variation of conflict within county-policy pairs. The baseline model is:

[11]This method is also applied by Acemoglu et al. (2021) and Colmer et al. (2023).

$$Y_{ct} = \alpha_c + \lambda_t + \beta * policy\_change_{pt} + X_{ct} + \varepsilon_{ct} \quad (1)$$

In my regression analysis, we examine the impact of compensation policy on the probability of conflict (protest or collective action), represented by the dummy variable Y_{ct}. Y_{ct} equals 1 if there is at least one land conflict in month t, at county-policy pair c. Given the low probability of conflict at county-month level, I have multiplied the conflict dummy variable by 100. A coefficient of 1 corresponds to a 1% increase in the probability of conflicts. The policy dummy variable, $policy\_change_{pt}$, equals 1 if a county in province p has a new compensation standard at time t, 0 otherwise. The equation (1) includes various components: α_c represents the county-policy pair fixed effect, capturing unobserved county-specific factors that may influence local conflict level. λ_t represents the time fixed effect at month level, accounting for time-specific factors that could affect conflicts across all counties. Additionally, I include control variables denoted as X_{ct} to account for other factors that may affect collective actions, including GDP per capita, industrial structure, local fiscal pressure (the ratio of fiscal expenditure to fiscal income) and population scale. These controls capture the heterogeneity across counties and further refine the estimation of the impact of price shocks on collective action probabilities. Since the conflict data is only available from January 2010 to June 2017, I focus on the compensation policy in this period. The policy is updated mostly every three years. For each county-policy pair, I focus on the time window 24 months before the policy, and 36 months after the policy. The observations before the policy may be affected by the previous compensation standard and thus concerns about the pre-policy trend may arise. As robustness checks, I also retain all the observations 30 months or 36 months just before the policy to control for pre-policy trend. In this specification, I employ the different timing of the policy across provinces. A positive coefficient β in equation (1) indicates that the change in land compensation leads to a higher probability of collective actions. To account for potential series correlations within counties across time, I cluster the standard errors at the county-policy pair level in all the regressions presented below[12].

Before proceeding with formal analysis, I first present the conflict trend from raw data before and after the policy without eliminating the county fixed effects and time fixed effects. The trend presented

[12]Using the conventional standard error clustered at province level might be controversial as recent studies by Abadie et al. (2020, 2023) showed that in causal inference, when the number of clusters in the sample is a large fraction of the number of clusters in the population, the cluster standard error would be inappropriate and severely inflated. This is because the conventional standard error clustered at province or state level is built on the infinite population assumption. In my study, instead of drawing a small sample randomly from infinite population, the sample size is very close to the population. However, there is no appropriate way to calculate the right standard error in such a scenario. As a comparison, we also report the standard error clustered provincial level. But we need to keep in mind that the SE clustered at province level is very conservative.

in Panel A, Figure 5, indicates an immediate increase in land conflict after the policy, while I do not find a similar trend of wage conflict, home-ownership conflict and medical conflict, as presented in Panels B to D, Figure 5.

4 Empirical results

4.1 Baseline results

I present the baseline results in Table 3, columns (1) and (2), where the conflict dummy variable has been multiplied by 100 for ease of interpretation. In column (1), only county fixed effects and calendar month fixed effects are controlled. In column (2), when more covariates are introduced, such as GDP per capita, the percentages of primary industry and secondary industry, the ratio of fiscal expenditure to fiscal revenue, and the population. Including these controls has only a minimal impact on the effect of the compensation policy. Specifically, I find a negative significant effect of the share of GDP in primary sector and fiscal pressure on the probability of land conflict. As a result, the effect of the compensation change on land conflict is positive. Specifically, I find that the probability of conflicts increases by 0.628% at the county-month level, corresponding to a relative increase of 9.80% (0.628% divided by the sample mean of the outcome variable, which is 6.405%). This result is consistent with the trend in Figure 5. From columns (3) to (6), Table 3, I use observations 30 months and 36 months before the policy to control the pre-policy trend and get consistent findings. The magnitude of the coefficients of columns (3) to (6) is slightly larger than the baseline estimate, indicating the observation far away before the policy may be affected by the previous compensation policy. I also present the intensive margin of the policy effect in Table A2 in the Appendix using the number of land conflicts in a month as the dependent variable (100*the number of days with conflict at the county-month level), indicating a relative increase of 11.22% (1.051% divided by the sample mean of the outcome variable 9.365%).

I make a simple comparison with other estimates about land conflict. Related research about the effect of land expropriation on conflict is Sha (2023), who uses individual level survey data and finds that an additional land expropriation increases the conflict probability with government officials by about 2% (average level of conflict is 4.8%). In Sha (2023), he cannot differentiate the land conflict from other conflict. Different from Sha (2022), I use the land conflict and measure the land conflict probability at the county-month level. My study indicates a rise of about 10% in land conflict. If the land conflict at aggregate level can be aggregated by individual' land conflicts, then a 10% rise in conflict at county-month level is equivalent to a 0.2% (10%*2%) increase in individual's land conflict

with governmental officials, which represents a 4.17% (0.2%/4.8%) increase relative to the average individual conflict with government officials.

4.2 Identification assumption

The identification of the difference-in-differences model in my study rests on the assumption of a common trend between the control group and the treated group before the policy conditioning on the covariates. To test this assumption and examine the dynamic effect of compensation changes on conflict, I employ the event study method. The event study model is as follows:

$$Y_{ct} = \alpha_c + \lambda_t + \Sigma_{k=-3,k\neq-1}^{6}\beta_k\eta_k + X_{ct} + \varepsilon_{ct} \tag{2}$$

Y_{ct}, α_c, λ_t and X_{ct} have the same definitions as previously mentioned in equation (1). Now, let's focus on the key variables of interest in the event study framework, denoted as vector η_k. In the event study framework, the indicator variables η_k represent the specific time periods relative to the omitted time event term -1, which corresponds to the time event just before the policy implementation in the sample. These indicator variables allow us to examine the differences between the treated and controlled counties during each event time. The coefficients β_k in the model reveal the variations in the outcome variable between the treated and control counties for each event time. If the land compensation change has a positive impact on conflicts, I anticipate the coefficients to increase after the policy and the estimated β_k before the policy are expected to be insignificant and constant over time, which is a crucial assumption for making causal inferences using the difference-in-differences (DID) method. To analyze the long-term policy effect, I group a time window of every 6 months as one event time. Specifically, observations from the month 0 when the policy is implemented to the 5th month are labeled as event 0. Observations from the 6th month to the 11th month are labeled as event 1. Observations before the policy, from the month -6th to the month -1st, are labeled as -1 and observations in the month -13th or earlier are labeled as event -3. By categorizing the data into these event time periods, I can capture the effects of the policy at different stages and examine how the outcomes evolve over time in a longer period. Similarly, standard errors are clustered at the county-policy pair level.

I then conduct an event study estimate using equation (2) to examine the common trend assumption as well as the dynamic impact of the land compensation change over time after considering the county fixed effects and time fixed effects. The results using different samples are presented in Figure 6. Before the implementation of the policy, the findings indicate no significant difference between the control group and the treated group, which supports the assumption of a common trend before the policy. This suggests that, prior to the policy, the conflict rates in both groups followed a similar pattern.

Importantly, there is no anticipation effect before the policy. After the policy is implemented, I observe an immediate and notable increase in the probability of conflict within the first six-month time window. This sharp increase shows that the policy change has an immediate impact on conflict and this effect lasts for even several years after the policy.

4.3 Robustness checks

4.3.1 Selection in the timing of compensation standards

Figure 3 presents the effective tenure of compensation policies, showing that the compensation policy is updated every 3 to 6 years in most provinces, with a few updated every 2 years or 7 years. The different effective periods of compensation policies across provinces may induce concerns that the timing of compensation standards may not be exogenous. For example, the provincial governors may introduce a new compensation standard as a response to the pre-policy conflict level or fiscal pressure, which may also affect the later conflict level. Then the assumption of exogeneity may be violated. I formally examine this using the conflict level or fiscal pressure before the introduction of a new compensation standard to predict the effective period of the previous standard, as these two are key factors that may affect the conflict level after the policy. Since the conflict level is significantly affected by the internet coverage rate across years, directly using the conflict level may not be valid. To avoid this problem, I first regress conflict level on time fixed effect and get the residuals; then I use the mean of the residuals at province level before the policy as a proxy for the conflict level before treatment to predict the effective period of the previous compensation standard. The result for pre-policy conflict is presented in appendix Table A3, column (1). I find that the effect of conflict level on the effective period is very small and insignificant. Column (2), Table A3 also presents the effect of pre-policy fiscal pressure (the mean of fiscal pressure at province level) on the timing of new compensation policies. These two columns indicate that the introduction of a new compensation level is not driven by the previous conflict level or fiscal pressure of local government. As a result, the timing of the new compensation is plausibly exogenous, thus validating the identification assumption.

In the baseline model, the county fixed effect model could absorb much of the effect of the time invariant factors, including the province specific characteristics, but it cannot control the turnover effect of the provincial leaders. The implementation of the compensation policy involves decision-making by provincial government leaders, who play a significant role in local governance. Although the pre-policy trend supports the common trend assumption conditioning on controls, there may be slight concerns that the provincial leaders may affect the timing of the policy and the outcome simultaneously. It is possible that these leaders strategically choose when to implement the policy (thus affecting the

effective tenure of the previous compensation policy), considering factors such as social stability and their promotions possibilities. The rising conflict may be coincide with other policies made by the provincial governors. Therefore, I need to consider the potential confounding effect of political leaders' turnover. Since the variation of the policy exists at the province level, directly controlling province leader fixed effect would absorb much of the variation of the policy I exploit in this paper. Instead, I test how the province governor's' characteristics affect the timing of compensation policy. I focus on the age of governors when they first took office, the education level (with a graduate degree or not) and major (economic/management or not), as these are important factors affecting governor's career development or preference[13]. Specifically, I estimate how these factors affect the effective tenure of previous policy (the months the governors adopted a new compensation policy after the governors took office), after controlling for the policy tenure during the last governor's period[14]. On average, the governors will adopt a new compensation policy 33.6 months after they took office in the position. The results are reported in Appendix, Table A3 columns (3) to (5). I find that among these factors, the effect of age and major is very small. Given the significant role of governor's age and major in their promotion in Chinese political structure, the political incentive of governors cannot explain the timing of compensation policy change. The magnitude of the effect of graduate degree on the timing of the policy is larger than that of age and major, but still not significant. Therefore, I conclude that the confounding effect of provincial governors' turnover could be minor.

To formally eliminate the potential effect of provincial governors' characteristics on the estimate and justify the robustness of the baseline result, I gradually add the age, gender, degree, major of the provincial governors in the model. The results are reported in columns (1) to (4), Table 4, respectively. I do not find a effect of the governors' characteristics on conflict level. In column (5), I further control for the governors' tenure fixed effect to get rid of the impact of governor's political turnover on my estimate. But even after I include more controls of provincial governor's characteristics, I still find a consistent estimate with the baseline result. The results suggest that the policy's impact on conflict is robust and not driven by changes in provincial leadership.

Further, the timing of the policy may take the season into consideration. If the time of implementing the compensation policy coincides with the government's budget cycle within a year, the budget cycle of the government for a specific province is an important factor that may influence my estimates. Additionally, the seasonal nature of employment may affect the opportunity cost of protest for individuals, leading to variations in conflict rates across months. To address these concerns, I have included the province-by-month fixed effects in the analysis. This control variable helps us account for

[13]I do not include gender as among the governors in the 36 policy changes, there is only 1 female provincial governor.

[14]This is because the governors could only affect the policy choice in his/her own period in the position.

the effect of seasonal variables that may be correlated with the timing of the provincial policy and could potentially impact the outcome variable. The result, reported in column (6), Table 4, shows that the effect of the policy remains consistent even after controlling for province-by-month fixed effects, providing further support for my analysis. This indicates that the observed increase in conflict rates is unlikely to be driven by the budget cycle or seasonal employment variations.

4.3.2 Anti-corruption campaign

The anti-corruption campaign initiated by Xi Jinping, in 2013, after assuming the top leadership position, may have some potential influence on my estimates. This campaign has had a significant deterrent effect on corruption (Chen and Kung 2019) and may have influenced the dynamics of protests. In Chinese context, the preference and attention of the political leader is often more influential and effective than institutional factors in shaping and implementing public policies. People might engage in protests believing that the anti-corruption campaign could address their suppressed demands. To address this concern, I examine whether the anti-corruption campaign led to an increase in protests. In the anti-corruption campaign from 2013 to 2017, provinces were randomly chosen to get inspected by the Central Commission for Discipline Inspection, which allows us to test the effect of the anti-corruption campaign directly. In the baseline model, I include a dummy variable that captures whether a province is under central inspection at a specific time. This information is derived from the report of the Central Commission for Discipline Inspection regarding its inspection activities. The timing of inspections in different provinces is presented in Appendix, Table A4. Considering the possibility of lagged effects of the inspections, I extend the treatment of the anti-corruption campaign to three months and six months later. For example, if Chongqing was under inspection from May 2013 to August 2013, I also assign a value of 1 to the treatment of the anti-corruption campaign for the three- or six-months following August 2013. The results, as reported in columns (1) to (3), Table 5, show the effect of the central inspection is negative even after the inspection took place. Importantly, the effect of the compensation policy remains consistent with the baseline results, indicating that the observed increase in conflict is primarily driven by the compensation change rather than the anti-corruption campaign.

4.3.3 Internet coverage

As I use the conflict data from CASM-China, which is based on internet sources, there is a potential concern regarding the internet coverage rate and its impact on my estimates. In my baseline model, I have incorporated county fixed effects to capture unobserved factors that may be correlated with the policy and outcome variable. Additionally, I include time fixed effects to account for shocks affecting

the entire country. Consequently, the baseline specification largely mitigates the measurement error problem. However, during the 2010s, internet coverage increased from 34.3% at the end of 2010 to 53.12% at the end of 2017. The rising internet coverage may lead to more conflicts to be reported online, and thus drives the positive estimate in the baseline result. I address this concern by conducting a formal test to assess whether internet coverage, measured by the number of internet users at the prefecture level (in tens of thousands), affects the probability of reporting a protest. The results are presented in columns (1) to (4) of Table 6. In column (1), I report a simple OLS regression without controlling for any other variables. The analysis reveals a significant relationship between the probability of protests and the scale of internet usage. However, in column (2), when I introduce county fixed effects, time fixed effects, and additional county-level covariates, the relationship diminishes substantially from 0.018% to 0.003%, implying that the county fixed effects and the other covariates can largely reduce bias caused by the internet coverage. Next, in column (3) of Table 6, I examine the effect of compensation changes while controlling the number of internet users at the prefecture level (in tens of thousands) in my baseline model. As a comparison, I also report the policy effect using the same sample but without controlling the internet coverage scale in column (4), Table6. Here, I find that the impact of internet coverage on my estimates is minimal, suggesting that it does not significantly affect the estimated effect of the compensation policy.

4.3.4 Alternative samples, definition and specification

I provide further robustness checks. First, since the main outcome variable, land conflict, is obtained from social media. Sometimes the information about the conflict is not accurate, such that one protest may have several different labels. For example, a protest could be labeled as "rural/land", "environment" and "Fraud" at the same time. This may increase the risk of misreporting other types of conflict as land conflict. To address this concern, I only use the conflict cases labeled as "Rural/land" as the land conflicts. If the conflict has at least one label that differs from "Rural/land", I drop this conflict case in my analysis. Then column (1), Table 7 reports the result using the refined conflict definition. The effect of the policy remains, though the magnitude changes slightly. Second, recent advances in econometrics show that in multiple periods Difference-in-Differences model, when the treatment effect is heterogeneous or the treated observations serve as part of the control group for later-treated observations, the DID estimate may be biased (Borusyak et al., 2023; De Chaisemartin et al., 2020; Goodman-Bacon, 2021; Gardner 2022; Callaway et al., 2021; Sun, et al., 2020). I use the imputation approach proposed by Borusyak et al. (2023) and the two-stage estimation framework by Gardner (2022) to estimate the treatment effect as robustness checks. The results are reported in columns (2) and (3), Table 7. My results are robust to heterogeneous treatment effects, though the magnitude is

slightly larger when I use Borusyak's and Gardner's method, which indicates that the baseline estimate may be a conservative estimate of the policy effect. Third, as the number of conflicts is significantly lower in 2010 than in other years, which may significantly affect my estimate. So I drop the sample in 2010 as a robustness check and present the result in column (4), Table 7. Lastly, I conduct one placebo test for land conflict, in which I randomly permute the policy time and conduct the same analyses as the baseline. Under the null that there is no association between pseudo-exposure (to compensation change) and land conflict for control group, randomly assigned pseudo-exposure to control counties would not affect the conflict level. I repeat the random assignment and regression process 500 times. The distribution of the coefficients measuring the impact of compensation changes are shown in Figure 7. All the coefficients are centered around zero. The dashed lines indicate the coefficients I find before. If my results are driven by unobservables rather than the compensation changes, the probability of finding the significant effect of compensation changes on land conflict is very low.

5 Mechanisms

I then explore the possible mechanisms. The compensation change may affect the conflict level in several ways. First, as existing evidence suggests, the inadequate compensation is one possible reason for the widespread land conflict (Sha, 2023; Cui, Ernan, et al., 2015; Zhao and Xie 2022). Intuitively, the sharp jump in land compensation could reduce land conflicts, as people receive better compensation from land expropriation. Second, the Tongan Event mentioned before suggests that the sharp jump in land compensation may lead to more conflicts, as people whose land is expropriated just before the policy may become angered when they find their compensation is significantly lower than their neighbors whose land is expropriated after the policy. Third, as evidenced by the Kunming Event, individuals may request fair compensation comparable to that of their neighbors. The increase in compensation may trigger more conflicts when the rise of compensation is unequal in adjacent regions and the compensation level becomes more unfair than before. Therefore, both the increases of compensation level and compensation inequality could affect the outcome. To disentangle the effect of compensation increases and compensation inequality, I first present the way I calculate the average compensation level and the inequality level and then estimate the effect of compensation increase and inequality.

5.1 Calculating land compensation

The policy also announces detailed compensation information for land in most regions, which allows us to calculate the magnitude of compensation increase and the level of inequality in compensation. I collect the compensation information of 1319 counties from 24 provinces, ranging from 2010 to 2017.

For most counties, the area is divided into several subregions and each of subregions has a different compensation. I calculate the average price and the standard deviation of the compensation price within a county using the number of subregions within a district as the weight for each district. But in some regions, I don't have the information of the size of each region, and therefore simply assign each region an equal weight[15]. The price formula is:

$$Avg\_price_c = \frac{1}{n}\Sigma_{i=1}^{n} Price\_district_{ic} * w_i \tag{3}$$

And the standard deviation formula is:

$$Std\_price_c = \sqrt{\frac{1}{n}\Sigma_{i=1}^{n}(Price\_district_{ic} - Avg\_price_c)^2 * w_i} \tag{4}$$

Where $Price\_district_{ic}$ is the compensation of district i in county c; n is the total number of districts within county c; w_i is the weight of district i, which equals the number of sub-regions within district i divided by the total sub-regions in across all the districts in county c.

I match the compensation data with the policy and test how the policy affects the standard deviation as well as the average price. In Appendix column (1), Table A5, I find that after the policy, the standard deviation increases by 803, which is about 12% (803/6657) of the standard deviation before the policy. Figure A2 in the Appendix also presents the distribution of compensation before and after the policy. The compensation distribution in Figure A2 shows that the compensation of land varies greatly across counties. In column (2), Table A5, I compare the average compensation before and after the policy. I find that after the policy, the average compensation increases by 10002 Yuan per Mu, which represents 29.07% of the average compensation before the policy. This evidence shows that the inequality level of compensation across regions increase and there is a big jump in compensation after the policy. To check if these estimates are not driven by a few outliers, I plot Figure 8, which compares the compensation standard deviation as well as compensation level before and after the policy. I find that the compensation after the policy increases significantly compared to the level before in Panel A and in more than half of the counties, the compensation standard deviation is skewed above the 45-degree line (STD of compensation becomes larger after the policy) in Panel B. There are a few counties where the compensation price is the same for all land within the county, and therefore the variance is 0. Panel C and D in Figure 8 present the distribution of the compensation change and the distribution of the change in compensation standard deviation, respectively.

[15]In some subdistricts, the number of villages is provided, such as Weidu District from Xuchang City presented in Appendix, Table A1 in the appendix. In these cases, I use the number of villages as the weight for each subdistrict. Otherwise, the weight is one for each region within a county.

5.2 The role of compensation increase

5.2.1 Baseline specification

The effect of compensation increase on conflict is unclear. The higher compensation after the policy may trigger discontent when land expropriation happened before the policy. Because these people whose land is expropriated before the policy may protest after the policy to ask higher compensation when they see their neighbor get significantly higher compensation. This channel indicates a positive effect of the policy on conflict. However, higher compensation would also reduce discontent and protests when people's land is expropriated at the new compensation level after the policy. The total effect of the rising compensation could be negative, positive or zero. To disentangle the effect of compensation increase, I interact the price increase with policy_change. The model is:

$$Y_{ct} = \alpha_c + \lambda_t + \beta Policy\_change_{pt} + \gamma Policy\_change_{pt} * dif\_price_c + X_{ct} + \varepsilon_{ct} \quad (5)$$

Where c denotes a county-policy pair, t denotes time (month by year). The outcome of interest is Y_{ct}, which equals 1 if there is at least one land conflict in month t, at county-policy pair c. Given the low probability of conflict at county-month level, I have multiplied the conflict dummy variable by 100. Different from equation (1), in this model, I add the interaction term of dif_price_c with $Policy\_change_{pt}$. dif_price_c equals the price difference between the compensation after the policy and the compensation before the policy (per 10 thousand Yuan) within a county. The key coefficients I am interested in is γ, which captures the heterogeneous effect of compensation increase on conflict. X_{ct} denotes other factors that may affect conflict, including GDP per capita, industrial structure, local fiscal pressure (the ratio of fiscal expenditure to fiscal income) and population scale, as well as the interaction between dif_price_c and time fixed effects.

5.2.2 Results

The column (1), Table 8 reports the estimate for equation (5). The price change has differential effects on conflicts. The effects of the compensation policy are typically smaller for counties with a larger compensation change after the policy. Based on the estimate, every 10 thousand Yuan per Mu increase in compensation would decrease the conflict level by 0.935%. From columns (2) to (3), I provide additional evidence of the robustness of the results, by using different time windows before the policy (30 months and 36 months) to control for the pretend. I also normalize the compensation rise by the compensation level and rerun the equation (5), the results, presented in Appendix, Table A6, are consistent with Table 8. These results indicate that higher compensation could mitigate land conflict. As a result, the mechanism that the rising compensation leads to more discontent among population

whose land is expropriated before the policy does not play a dominant role in explaining our baseline results.

5.3 The role of unequal compensation across regions

5.3.1 Baseline specification

The magnitude of compensation changes within counties varies greatly when the new compensation policy is implemented. If some districts within a county experience a higher increase in compensation than other districts in the same county, the gap in compensation between districts within a county would become larger. Thus, some counties have a higher level of compensation inequality within the county after the policy than before, while others have the same level or lower level of compensation inequality than before the policy. Since I am interested in the differential effect of the compensation inequality on conflict levels, I also exploit variation in whether a county experiences an increase in the compensation inequality within the county. To disentangle the effect of unequal compensation changes across regions, I use the following model:

$$Y_{ct} = \alpha_c + \lambda_t + \beta Policy\_change_{pt} + \gamma Policy\_change_{pt} * higher\_inequality_c + X_{ct} + \varepsilon_{ct} \qquad (6)$$

Equation (6) is similar to equation (5). The only differences are that I use the interaction term of $higher\_inequality_c$ with $Policy\_change_{pt}$. $higher\_inequality_c$ equals 1 if the county has a higher level of compensation inequality after the policy than the inequality level before the policy[16]. The key coefficients I am interested in is γ, which captures the effect of unequal compensation changes on conflict. X_{ct} denotes other factors that may affect collective actions, including GDP per capita, industrial structure, local fiscal pressure (the ratio of fiscal expenditure to fiscal income) and population scale, as well as the interaction between $higher\_inequality_c$ and time fixed effects.

5.3.2 Results

The column (1), Table 9 report the estimates for equation (6). The change in compensation inequality has differential effects on conflicts. The effects of the compensation policy are larger (1.36%) for counties with an increasing compensation inequality after the policy than for other counties. In columns (2) to (3), Table 9, I provide additional evidence of the robustness of the results, by using different time windows before the policy (30 months and 36 months) to control for the pretend. I also normalize the compensation inequality by the compensation level and rerun the equation (6), the results, presented in Appendix, Table A7, are consistent with Table 9.

[16]Here I do not directly use the absolute value of the change in compensation standard deviation in the model as the economic meaning of the coefficient is not quite straightforward. But the results are available upon request.

I further include the interactions of compensation increase with the policy change, and the interactions of compensation inequality with the policy change together in the model to examine the role of compensation increase and compensation inequality simultaneously. The results are presented in Appendix, Table A8, which are consistent with the results in Table 8 and 9.

6 Alternative mechanisms

There are several other possible mechanisms that may explain the rising conflicts. On the one hand, the local government may change the land expropriation behavior as a response to the compensation change. For example, the government may expropriate more land after the policy. On the other hand, the high compensation may increase the economic burden on the government, individuals and companies to expropriate the land and as a result, they may fail to follow legal procedures during land acquisition, which could result in the loss of farmers' interests.

6.1 The effect of land area being expropriated by the government

The land conflict is directly affected by the scale of land expropriation. The increase in conflict after the policy may be caused by the changing land expropriation behavior of local government. For example, the rising compensation may induce a fiscal burden for local government, and the local government may want to expropriate and sell more land to gain income. In order to control for the effect of land expropriation area, I use the land transaction data that is collected from the website of the land transaction monitoring system, called the China Land market[17]. The micro land transaction data reports all the land transaction behaviors from 2004 to 2020. Detailed information, including the land location, transaction date, the purpose of the land use, the size of the land, the sources of the land, the price of the land, and so on. The land transaction data records whether the land parcel was owned collectively by villagers or not before transaction. Until 2020, there are over 2.7 million transactions recorded, of which around 40% the of land comes from collective-owned land, 21% comes from governmental land reserve repository and the remaining from state-owned land that has already been used for urban construction before. These land parcels transacted in the land market should be expropriated by the government before the transaction and therefore the size of the land could be used as a proxy for land expropriation. I extract transaction data of land that was collective owned land just before transaction and construct panel data of the total land transaction area at the county-month level. I directly control the land area transacted in each period in the model. The result is reported in column (1), Table 10. I find the effect of the policy remains consistent with the baseline

[17] https://www.landchina.com/

result. Considering there might be lagged effect of land expropriation, I gradually add the land area transacted one month before, two months before, until 6 months before in the model. The results are given in columns (2) to (7), Table 10. I find that land expropriation area has minimal and ignorable effect on my estimate. Therefore, the area of land expropriation cannot explain the effect of the policy on conflict[18].

6.2 Illegal behaviors of local government due to fiscal pressure

Obtaining the land from farmers and selling the land in the land market is a critical channel in collecting income for local governments. The fiscal pressure resulted from the higher compensation may lead to more unlawful government practices that violate the land expropriation law. For example, the increasing costs associated with land expropriation can lead to delays in payments to farmers, thereby exacerbating conflicts. I formally investigate this channel by examining the heterogeneous impact of compensation changes across different levels of fiscal pressure. As a proxy for fiscal pressure, I employ the ratio of fiscal expenditure to fiscal revenue. A high ratio indicates that the local government is under greater fiscal pressure and is more likely to respond to the policy (such as delaying compensation to farmers). I define a dummy variable *high_pressure*, which equals 1 if the fiscal pressure is higher than the median, 0 otherwise. Then I add an interactive term of the *policy_change* with *high_pressure* in the model as well as the interactive effect of *high_pressure* with time fixed effects. The results are presented in Table 11. Interestingly, my findings reveal that the effect of compensation changes is more pronounced in low fiscal-pressure counties, where delays in compensating farmers are less likely to occur, although the effect is not statistically significant. These results do not support the hypothesis that fiscal pressure plays a significant role in the observed outcomes. As a result, I do not find evidence supporting the hypothesis of illegal practice (induced by fiscal pressure of local governments).

6.3 Conflict between farmers and individuals or companies

Although only the government has the authority to expropriate rural land, other individuals and companies who want to obtain the land will also involve themselves in expropriation. Similar to the government, a higher compensation may lead to interest conflicts between farmers and these individuals or companies as they want to minimize the cost of land. Given the limited information about protests, it is difficult to determine whether the conflicts involved local people and companies (private conflict)

[18]The result about how the land expropriation behaviors of local government changes as a response to the compensation policy is not presented here but I do not find evidence that there are more land expropriations after the policy. Instead, the government strategically expropriate more land just before the policy to minimize the expropriation cost. The estimation result is available upon request.

or the conflicts happened between local people and the government (public conflict). If private conflict hypothesis holds, then the policy implication of our study would be quite different. However, I don't think that private conflicts play an important role. On the one hand, the result in Table 8 shows that the rise of compensation could mitigate land conflict, which is inconsistent with the private conflict hypothesis. On the other hand, the compensation to farmers only forms a small part of the market value of land-the cost individuals and companies need to pay to acquire the land. For example, Landesa (2012) finds from a survey of nearly 1800 villages that villagers who had lost land reported receiving an average of 18,739 yuan per mu – a paltry 2.4 percent of the 778,000 yuan per mu received by local governments. Panel A, Figure 9 shows the average price of land traded in the market from 2010 to 2017[19]. In 2010, the average price of land is 2882 Yuan/m^2, which rose to 4083/m^2 in 2017. While in Panel B, Figure 9 shows that in 2010, the average compensation to farmers for expropriated land was 47 Yuan per m^2 in 2010 and 70 in 2017[20]. As a result, the compensation accounts for around 2% of the market value and the effect of compensation increase on the cost to obtain land is small.

7 More discussion

7.1 The effect of compensation policy on other types of conflict

The CASM-China data also records other types of conflicts, allowing us to examine whether the patterns I observe exist in other types of conflicts. I report the effect of the compensation policy on the other three types of conflicts: wage-related conflict, medical-issue-related conflict, and home-ownership conflict. These three types of conflicts also extensively exist in China. As Table 2 shows, the level of these three types of conflicts is 6.534%, 2.542% and 4.911%, which have comparable magnitudes as the land conflict. However, the results, as presented in Table 12, indicate a small and non-significant effect of the policy on these three types of conflict. The results further indicate that the effect of the policy on land conflict is not driven by some unobserved factors. Interestingly, the effect of land compensation changes on home ownership conflict is slightly larger than other conflicts. This is consistent with the fact that household demolition happened in some land expropriations. But the home ownership conflict data is noisier than land conflict as many home ownership conflicts may exist in urban areas.

7.2 Is the judicial system effective?

In land expropriation, the interest of farmers might be undermined by governments. As an alternative method to deal with interest conflicts between government and individuals, whether the judicial sys-

[19]The data comes from China Land and Resources Bulletin from 2010 to 2017.

[20]I collect the compensation data from various governmental websites.

tem is effective in protecting farmers' interests? I examine if the compensation changes lead to more administrative lawsuit cases concerning land expropriation, in which individuals litigate against the local government.

I collect lawsuit cases related to land expropriation from the official information disclosure website of the Supreme People's Court, known as "China Judgements Online"[21]. This website serves as a repository for legal accusation reports in China, covering a significant portion of the cases reported since 2014. As of 23 February 2022, the website contains approximately 130 million reports, offering a vast and comprehensive dataset. These lawsuit reports provide detailed information about each case, including the plaintiff, defendant, accusation reasons, accusation time, and location. The rich information captured in these reports enables us to gain insights into the trends of land-related conflict. By identifying and extracting the cases relevant to land expropriation, I can focus on conflicts related to this issue. I specifically identified administrative lawsuit cases related to land expropriation using relevant keywords such as "land expropriation" or "Tu Di Zheng Shou." In the administrative lawsuit cases, the plaintiffs are citizens or companies while the defendants are the local government. Since the legal documents are mainly available from 2014 onwards due to China's Judicial Transparency Reform, I focus on the period between 2014 and 2019[22]. I get 13553 administrative lawsuit cases concerning land expropriation from 2014 to 2019. During this time, there are a lot of variations in the compensation change. By analyzing these documents, I can construct panel data on the number of administrative lawsuit cases about land expropriation at county-month level.

Formal regression tests are conducted to evaluate the effect of compensation changes on the probability of administrative lawsuits concerning land expropriation. The results, presented in Table 13, indicate a minimal and statistically insignificant effect of compensation changes on the probability of administrative lawsuits. Overall, the findings suggest that while land protests may increase following a compensation change, there is no substantial impact on the likelihood of administrative lawsuits about land expropriation.

This is consistent with the traditional view of the lack of judicial independence in China and the low level of trust in the judicial system when dealing with issues involving the government (Cao et al., 2023). This evidence shows that in a weak property right environment, the legal system may not be effective in protecting individuals' interests. This can explain why people tend to resort to protests, instead of seeking justice from the legal system.

[21] https://wenshu.court.gov.cn/

[22] The data in 2020 is not included as the covid distorted the daily task of posting the legal documents.

8 Conclusion

Land expropriation is widely used by governments in developing countries to boost economic growth, but they also come at the cost of creating discontent among the population if people do not feel adequately compensated. If this discontent flares up into conflict, it can have large economic costs. Thus, it is important to design compensation policies that reduce discontent and are perceived as fair by the population. This paper provides evidence on how land compensation changes affect public discontent in China, the country with by far the most expropriations in the world.

By analyzing exogenous shocks in land compensation across provinces in China and unique conflict data set, I test whether increased compensation effectively resolves conflicts. However, my study reveals a counter-intuitive result. Despite the implementation of a new and improved compensation policy, I find a surge in land conflict after the policy, but similar trends are not observed in other non-land conflicts. Subsequent investigation using detailed land compensation information over 1300 counties reveals that higher compensation could mitigate the discontent in land expropriation. More importantly, the compensation changes actually exacerbate grievances and lead to more conflicts, as the compensation increases unevenly in adjacent regions. My results cannot be explained by the economic incentive of individuals and firms in seeking to obtain land. The results highlight the need for progressively changing compensation policies to reduce conflict around land-transfer programs. This study provides general implications in making and implementing public policies to avoid and reduce civil unrests.

References

[1] Abadie, Alberto, et al. "Sampling-based versus design-based uncertainty in regression analysis." Econometrica 88.1 (2020): 265-296.

[2] Abadie, Alberto, et al. "When should you adjust standard errors for clustering?." The Quarterly Journal of Economics 138.1 (2023): 1-35.

[3] Acemoglu, Daron, David Y. Yang, and Jie Zhou. "Political pressure and the direction of research: Evidence from chinas academia." Working Paper. 2021.

[4] Adhvaryu, Achyuta, et al. "Resources, conflict, and economic development in Africa." Journal of Development Economics 149 (2021): 102598.

[5] Albertus, Michael. "Land reform and civil conflict: Theory and evidence from Peru." American Journal of Political Science 64.2 (2020): 256-274.

[6] Arbatlı, Cemal Eren, et al. "Diversity and conflict." Econometrica 88.2 (2020): 727-797.

[7] Baldwin, Kate. "When politicians cede control of resources: Land, chiefs, and coalition-building in Africa." Comparative Politics 46.3 (2014): 253-271.

[8] Bazzi, Samuel, and Christopher Blattman. "Economic shocks and conflict: Evidence from commodity prices." American Economic Journal: Macroeconomics 6.4 (2014): 1-38.

[9] Blattman, Christopher, Alexandra C. Hartman, and Robert A. Blair. "How to promote order and property rights under weak rule of law? An experiment in changing dispute resolution behavior through community education." American Political Science Review 108.1 (2014): 100-120.

[10] Boone, Catherine. "Politically allocated land rights and the geography of electoral violence: The case of Kenya in the 1990s." Comparative Political Studies 44.10 (2011): 1311-1342.

[11] Borusyak, Kirill, Xavier Jaravel, and Jann Spiess. "Revisiting Event Study Designs: Robust and Efficient Estimation," (2023). Working paper.

[12] Buntaine, Mark, et al. Does the Squeaky Wheel Get More Grease? The Direct and Indirect Effects of Citizen Participation on Environmental Governance in China. No. w30539. National Bureau of Economic Research, 2022.

[13] Cai, Yongshun. "Power structure and regime resilience: contentious politics in China." British Journal of Political Science 38.3 (2008): 411-432.

[14] Callaway, Brantly, and Pedro HC Sant'Anna. "Difference-in-differences with multiple time periods." Journal of econometrics 225.2 (2021): 200-230.

[15] Cantoni, Davide, et al. "Protests". Annual Review of Economics, forthcoming, 2023.

[16] Cao, Guangyu, Chenran Liu, and Li-An Zhou. "Suing the government under weak rule of law: Evidence from administrative litigation reform in China." Journal of Public Economics 222 (2023): 104895.

[17] Caselli, Francesco, and Wilbur John Coleman. "On the theory of ethnic conflict." Journal of the European Economic Association 11.suppl_1 (2013): 161-192.

[18] Cederman, Lars-Erik, Nils B. Weidmann, and Kristian Skrede Gleditsch. "Horizontal inequalities and ethnonationalist civil war: A global comparison." American Political Science Review 105.3 (2011): 478-495.

[19] Chen, Daniel L., and Susan Yeh. "Growth under the shadow of expropriation? The economic impacts of eminent domain." (2020).

[20] Chen, T., Kung, J. K. S. (2019). Busting the "Princelings": The campaign against corruption in China's primary land market. The Quarterly Journal of Economics, 134(1), 185-226.

[21] Colmer, Jonathan, Mary F. Evans, and Jay Shimshack. Environmental citizen complaints. No. dp1903. Centre for Economic Performance, LSE, 2023.

[22] Cui, Ernan, et al. "How do land takings affect political trust in rural China?." Political Studies 63.1_suppl (2015): 91-109.

[23] De Chaisemartin, Clément, and Xavier d'Haultfoeuille. "Two-way fixed effects estimators with heterogeneous treatment effects." American Economic Review 110.9 (2020): 2964-96.

[24] DiGiuseppe, Matthew, and Patrick E. Shea. "Us patronage, state capacity, and civil conflict." The Journal of Politics 84.2 (2022): 767-782.

[25] Esteban, Joan, and Debraj Ray. "Conflict and distribution." Journal of Economic Theory 87.2 (1999): 379-415.

[26] Esteban, Joan, and Debraj Ray. "Linking conflict to inequality and polarization." American Economic Review 101.4 (2011): 1345-1374.

[27] Esteban, Joan, Laura Mayoral, and Debraj Ray. "Ethnicity and conflict: Theory and facts." science 336.6083 (2012): 858-865.

[28] Finkel, E., Gehlbach, S., Olsen, T. D. (2015). Does reform prevent rebellion? Evidence from Russia's emancipation of the serfs. Comparative Political Studies, 48(8), 984-1019.

[29] Fisman, Raymond, et al. "What motivates non-democratic leadership: Evidence from COVID-19 reopenings in China." Journal of Public Economics 196 (2021): 104389.

[30] Gardner, John. "Two-stage differences in differences." arXiv preprint arXiv:2207.05943 (2022).

[31] Goodman-Bacon, Andrew. "Difference-in-differences with variation in treatment timing." Journal of Econometrics 225.2 (2021): 254-277.

[32] Hillesund, Solveig, et al. "Horizontal inequality and armed conflict: A comprehensive literature review." Canadian Journal of Development Studies/ Revue canadienne d'études du développement 39.4 (2018): 463-480.

[33] Huntington, Samuel. Political Order in Changing Societies. New Haven, CT: Yale University Press, 1968.

[34] Ito, Takeshi, Noer Fauzi Rachman, and Laksmi A. Savitri. "Power to make land dispossession acceptable: a policy discourse analysis of the Merauke Integrated Food and Energy Estate (MIFEE), Papua, Indonesia." Journal of Peasant Studies 41.1 (2014): 29-50.

[35] Jaimovich, Dany, and Felipe Toledo. "The grievances of a failed reform: Chilean land reform and conflict with indigenous communities." (2021).

[36] Jedwab, Remi, Noel D. Johnson, and Mark Koyama. "Negative shocks and mass persecutions: evidence from the Black Death." Journal of Economic Growth 24 (2019): 345-395.

[37] King, Gary, Jennifer Pan, and Margaret E. Roberts. "How censorship in China allows government criticism but silences collective expression." American political science Review 107.2 (2013): 326-343.

[38] Kołczyńska, Marta. "Changes or cross-national differences? Effects of economic inequality on protest participation." Social Science Quarterly 101.1 (2020): 256-268.

[39] Iacoella, Francesco, Patricia Justino, and Bruno Martorano. Do pandemics lead to rebellion? Policy responses to COVID-19, inequality, and protests in the USA. No. 2021/57. WIDER Working Paper, 2021.

[40] Landesa. Findings from Landesa's Survey of Rural China Published [online]. (2012). Available from: http:// www.landesa.org/news/6th-china-survey [Accessed 27 June 2013].

[41] Lorentzen, Peter. "China's strategic censorship." American Journal of political science 58.2 (2014): 402-414.

[42] Lorentzen, Peter. "Designing contentious politics in post-1989 China." Modern China 43.5 (2017): 459-493.

[43] Passarelli, Francesco, and Guido Tabellini. "Emotions and political unrest." Journal of Political Economy 125.3 (2017): 903-946.

[44] Power, Séamus A. "The deprivation-protest paradox: How the perception of unfair economic inequality leads to civic unrest." Current Anthropology 59.6 (2018): 765-789.

[45] Qin, Bei, David Strömberg, and Yanhui Wu. "Social media and collective action in China." (2021).

[46] Qin, Bei, David Strömberg, and Yanhui Wu. "Why does China allow freer social media? Protests versus surveillance and propaganda." Journal of Economic Perspectives 31.1 (2017): 117-140.

[47] Sambanis, Nicholas, and Moses Shayo. "Social identification and ethnic conflict." American Political Science Review 107.2 (2013): 294-325.

[48] Shapiro, Jacob N., and Oliver Vanden Eynde. "Fiscal Incentives for Conflict: Evidence from India's Red Corridor." Review of Economics and Statistics (2022): 1-9.

[49] Sha, Wenbiao. "The political impacts of land expropriation in China." Journal of Development Economics 160 (2023): 102985.

[50] Sun, Liyang, and Srah Abraham. "Estimating dynamic treatment effects in event studies with heterogeneous treatment effects." Journal of Econometrics 225.2 (2021): 175-199.

[51] Zhang, Han, and Jennifer Pan. "Casm: A deep-learning approach for identifying collective action events with text and image data from social media." Sociological Methodology 49.1 (2019): 1-57.

[52] Zhao, Xiaohang, and Yu Xie. "The effect of land expropriation on local political trust in China." Land Use Policy 114 (2022): 105966.

Tables and Figures

Table 1: The update of compensation policy across provinces

year	Province
Earlier	Chongqing (Jan 2008); Guangdong (Aug 2006); Shanghai (Sep 2008); Tianjin (April 2007);
2009	Gansu (Nov); Heilongjiang (Jan); Henan (Nov); Hubei (Dec); Shandong (July); Shanxi (Dec); Yunnan (July); Zhejiang (Jan);
2010	Anhui (Jan); Hunan (March); Inner Mongolia (Jan); Jilin (Jan); Liaoning (Jan); Ningxia (Jan); Qinghai (May); Shaanxi (May); Sichuan (Jan);
2011	Guangdong (Jan 41.50%); Heilongjiang (July 41.72%); Jiangsu (April 31.67%); Jiangxi (March 21.51%)
2012	Hebei (Jan 50.21%); Inner Mongolia (Jan 225.73%);
2013	Chongqing (Jan 18.22%); Fujian (Jan); Gansu (Jan 25.56%); Guangxi (Jan 11.16%); Henan (Feb 19.19%); Hunan (Jan 34.34%); Shandong (Jan 26.67%); Shanghai (Sep 24.19%); Shanxi (June 24.64%);
2014	Hainan (July); Hubei (April 23.41%); Tianjin (Oct 48.39%); Yunnan (June 20.34%); Zhejiang (July 9.52%);
2015	Anhui (March 28.84%); Hebei (June 23.41%); Jiangxi (Sep 32.38%); Sichuan (Jan 30.82%);
2016	Guangdong (Sep 23.37%); Guangxi (Jan 21.94%); Henan (Sep 31.50%); Heilongjiang (Jan); Jilin (Jan 47.52%); Liaoning (Jan 25.55%); Ningxia (Jan 75.04%); Qinghai (Jan 37.46%); Shandong (Jan 16.65%);
2017	Fujian (March); Gansu (Feb); Shanghai (June); Zhejiang (Sep);
2018	Hunan (Jan); Inner Mongolia (Jan); Shanxi (June);
2019	Shaanxi (Jan);
Other	Guizhou (Jan 2010); Prefectures at Guizhou: An Shun Shi (Sep 2017); Bi Jie Shi (Feb 2018); Gui yang Shi (Jan 2017); Qian Dong Nan Zhou (July 2017); Qian Nan Zhou (Jan 2016); Qian Xi Nan Shi (Sep 2017); Tongren Shi (July 2013); Tongren Shi (Jan 2018); Zhun Yi Shi (July 2017); Liu Pan Shui Shi (Jan 2018);

Notes. I collect policy information from various governmental websites.

Table 2: Descriptive statistics

Variable	Obs	Mean	Std
Land conflict	162,055	6.405	24.485
Wage conflict	162,055	6.534	24.713
Home conflict	162,055	4.911	21.610
Medical conflict	162,055	2.542	15.741
Policy_change	162,055	0.573	0.495
lngdp	162,055	10.457	0.638
GDP share-first	162,055	16.818	11.636
GDP share-second	162,055	46.727	13.853
fiscal pressure	162,055	3.971	4.495
Population (10k)	162,055	53.531	34.958

Notes. The conflict data comes from CASM-China. Other variables come from the China County Statistical Yearbook and China City Statistical Yearbook.

Table 3: The effect of compensation changes on land conflict

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcome: land conflict					
	Baseline		>=-30th month		>=-36th months	
policy_change	0.651**	0.628**	0.699***	0.686***	0.754***	0.746***
	(0.259)	(0.259)	(0.250)	(0.250)	(0.242)	(0.242)
	(0.354)	(0.351)	(0.349)	(0.348)	(0.386)	(0.385)
lngdp		-1.097*		-0.813		-0.697
		(0.581)		(0.531)		(0.513)
		(0.739)		(0.715)		(0.686)
share_first		-0.093**		-0.099**		-0.088**
		(0.044)		(0.040)		(0.038)
		(0.042)		(0.038)		(0.035)
share_second		0.002		-0.012		-0.017
		(0.023)		(0.021)		(0.020)
		(0.017)		(0.014)		(0.013)
fiscal_ratio		-0.044*		-0.048**		-0.047**
		(0.023)		(0.022)		(0.023)
		(0.026)		(0.026)		(0.028)
population		0.007		-0.019		-0.044
		(0.060)		(0.048)		(0.043)
		(0.068)		(0.054)		(0.057)
County FE	Y	Y	Y	Y	Y	Y
Year-month FE	Y	Y	Y	Y	Y	Y
Mean of outcome	6.405	6.405	6.354	6.354	6.290	6.290
adj. R-sq	0.100	0.100	0.098	0.098	0.098	0.098
N	162055	162055	175717	175717	188650	188650

Notes. This table presents the effect of compensation changes on land conflict. The dependent variable is the product of a dummy variable for whether the county has at least one land conflict or not in a month with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. From column (1) to (6), I use the observations 24 months, 30 months, and 36 months before the policy to control for the pre-policy trend, respectively. In column (1), (3) and (5), I only control the county Fixed Effects and calendar month Fixed Effects. In columns (2), (4) and (6), I add more controls, like the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue and the population. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table 4: The effect of provincial governor's characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcome: land conflict					
policy_change	0.628**	0.627**	0.622**	0.622**	0.626**	0.654**
	(0.259)	(0.259)	(0.259)	(0.259)	(0.265)	(0.280)
	(0.350)	(0.350)	(0.350)	(0.349)	(0.358)	(0.357)
age	0.002	0.002	0.005	0.005	0.082**	0.065*
	(0.031)	(0.031)	(0.031)	(0.031)	(0.034)	(0.035)
	(0.075)	(0.075)	(0.072)	(0.072)	(0.078)	(0.081)
male		0.659	0.669	0.770	0.676	0.350
		(2.101)	(2.102)	(2.110)	(2.108)	(2.179)
		(0.667)	(0.666)	(0.859)	(0.789)	(0.788)
graduate_degree			0.229	0.211	0.144	0.218
			(0.359)	(0.361)	(0.362)	(0.371)
			(0.720)	(0.715)	(0.699)	(0.738)
econ_major				0.117	-0.076	-0.192
				(0.244)	(0.242)	(0.251)
				(0.622)	(0.501)	(0.516)
Other covariates	Y	Y	Y	Y	Y	Y
County FE	Y	Y	Y	Y	Y	Y
Year-month FE	Y	Y	Y	Y	Y	Y
Tenure-FE					Y	Y
Province-month FE						Y
Mean of outcome	6.405	6.405	6.405	6.405	6.405	6.405
adj. R-sq	0.100	0.100	0.100	0.100	0.100	0.101
N	162055	162055	162055	162055	162055	162055

Notes. This table presents the effect of provincial governor's characteristics on our estimates. The main dependent variable is the product of a dummy variable for whether the county has at least one land conflict or not in a month with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. In columns (1) to 45), I gradually add more controls, like the age, gender, degree, and major of provincial governors. In column (5), I control for the provincial governors' tenure Fixed effects in the position. In column (6), I further control the interaction of month fixed effects within a year and province fixed effects. The regressions also control the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue, the population, the county Fes and calendar month Fes. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1

Table 5: The effect of anti-corruption campaign

	(1)	(2)	(3)
	Outcome: land conflict		
	Months Under inspection	Three more months	Six more months
policy_change	0.628**	0.622**	0.616**
	(0.259)	(0.260)	(0.260)
	(0.348)	(0.355)	(0.359)
anti_corrupt	0.164		
	(0.263)		
	(0.292)		
anti_corrupt3		-0.226	
		(0.229)	
		(0.234)	
anti_corrupt6			-0.354
			(0.219)
			(0.297)
Covariates	Y	Y	Y
County FE	Y	Y	Y
Year-month FE	Y	Y	Y
Mean of outcome	6.405	6.405	6.405
adj. R-sq	0.100	0.100	0.100
N	162055	162055	162055

Notes. This table presents the effect of anti-corruption campaign on my estimate. The main dependent variable is the product of a dummy variable for whether the county has at least one land conflict or not in a month with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. In column (1), I control for the anti-corruption campaign, which equals 1 if the province is under inspection and 0 otherwise. In columns (2) and (3), we extend the control of anti-corruption campaign to three months and six months after the inspection, respectively. The regressions control for the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue, the population, the county Fes and calendar month Fes. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table 6: The effect of Internet coverage

	(1)	(2)	(3)	(4)
	Outcome: land conflict			
Internet	0.018***	0.003	0.003*	
	(0.001)	(0.002)	(0.002)	
	(0.001)	(0.002)	(0.002)	
policy_change			0.639**	0.635**
			(0.269)	(0.269)
			(0.357)	(0.355)
Covariates		Y	Y	
County FE		Y	Y	Y
Year-month FE		Y	Y	Y
Mean of outcome	6.405	6.405	6.405	6.405
adj. R-sq	0.006	0.099	0.099	0.099
N	154485	154485	154485	154485

Notes. This table presents the effect of internet coverage on our estimates. In column (1), I estimate how internet usage scale affects the probability of conflict in a simple linear regression. In column (2), I add more controls, such as the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue, the population, the county Fes and calendar month Fes. In column (3), I estimate the effect compensation policy after controlling the scale of internet usage. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. The sample in column (4) is the same as the sample in column (3). policy_ change is an indicator that equals one if the county implemented a new compensation policy and zero otherwise. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table 7: Alternative conflict definition, methods and sample

	(1)	(2)	(3)	(4)
	Outcome: land conflict			
	new_landconflict	DID Robust- Borusyak	DID Robust- Gardner	>2010
policy_change	0.416*	0.946***	1.226***	0.641**
	(0.220)	(0.205)	(0.385)	(0.277)
	(0.322)	(0.152)	(0.631)	(0.297)
Covariates	Y	Y	Y	Y
County FE	Y	Y	Y	Y
Year-month FE	Y	Y	Y	Y
Mean of outcome	4.489	6.405	6.405	6.822
adj. R-sq	0.073			0.098
N	162055	153,362	162055	141783

Notes. This table presents the effect of compensation change policy on land conflict using alternative time windows, definition of conflict and DID robust method. The dependent variable is the product of a dummy variable for whether the county has at least one land conflict or not in a month with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. In columns (1) and (2), I use the sample within 18 months before the policy or within 30 months before the policy, respectively. In column (3), I use the refined conflict definition concerning "Rural/land". In columns (2) and (3), I use the methods proposed by Borusyak et al. (2023) and Gardner (2022) to perform the regression, respectively. In column (4), I use the sample from 2011 to 2017. In all columns, I control the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue and the population, the county Fixed Effects and calendar month Fixed Effects. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table 8: The heterogeneous effect of compensation increase

	(1)	(2)	(3)
	Outcome: land conflict		
	>=-24th month	>=-30th month	>=-36th month
policy_change	2.215***	1.985***	1.820***
	(0.417)	(0.401)	(0.409)
	(0.885)	(0.843)	(0.821)
policy_change *price_increase	-0.935***	-0.930***	-0.774**
	(0.339)	(0.323)	(0.335)
	(0.598)	(0.574)	(0.562)
County Covariates	Y	Y	Y
County FE	Y	Y	Y
Year-month FE	Y	Y	Y
Mean of outcome	6.254	6.221	6.127
adj. R-sq	0.078	0.074	0.072
N	93040	101530	109589

Notes. This table presents the effect of compensation increase on our estimate. The dependent variable is the product of a dummy variable for whether the county has at least one land conflict or not in a month with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. Price_increase is the difference between the compensation level after the policy and before the policy at county level. In columns (1), (2) and (3), I use the observations 24 months, 30 months and 36 months before the policy to control the pre-policy trend, respectively. In all columns, I also control the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue, the population, the county Fes, calendar months Fes, and the interaction of price_increase with time fixed effects. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table 9: The heterogeneous effect of unfair compensation changes within county

	(1)	(2)	(3)
	Outcome: land conflict		
	>=-24th month	>=-30th month	>=-36th month
policy_change	0.553	0.297	0.334
	(0.400)	(0.391)	(0.384)
	(0.733)	(0.691)	(0.683)
policy_change *higher_inequality	1.292***	1.338***	1.248***
	(0.453)	(0.447)	(0.443)
	(0.856)	(0.804)	(0.786)
County Covariates	Y	Y	Y
County FE	Y	Y	Y
Year-month FE	Y	Y	Y
Mean of outcome	6.254	6.221	6.127
adj. R-sq	0.078	0.074	0.073
N	93040	101530	109589

Notes. This table presents the effect of inequality of compensation within county on our estimate. The dependent variable is the product of a dummy variable for whether the county has at least one land-related conflict or not in a month with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. higher_inequality is a dummy variable indicating if the county has a larger inequality level in compensation after the policy than before the policy. In columns (1), (2) and (3), I use the observations 24 months, 30 months and 36 months before the policy to control the pre-policy trend, respectively. In all columns, I also control the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue, the population, the county Fes, calendar months Fes, and the interaction of higher_inequality with time fixed effects. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table 10: The effect of the scale of land expropriation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Outcome: land conflict						
policy_change	0.628**	0.627**	0.627**	0.629**	0.629**	0.627**	0.628**
	(0.259)	(0.259)	(0.259)	(0.259)	(0.259)	(0.259)	(0.259)
	(0.350)	(0.350)	(0.351)	(0.350)	(0.350)	(0.349)	(0.349)
area	Y	Y	Y	Y	Y	Y	Y
area_pre1		Y	Y	Y	Y	Y	Y
area_pre2			Y	Y	Y	Y	Y
area_pre3				Y	Y	Y	Y
area_pre4					Y	Y	Y
area_pre5						Y	Y
area_pre6							Y
County FE	Y	Y	Y	Y	Y	Y	Y
Year-month FE	Y	Y	Y	Y	Y	Y	Y
Mean of outcome	6.405	6.405	6.405	6.405	6.405	6.405	6.405
adj. R-sq	0.100	0.100	0.100	0.100	0.100	0.100	0.100
N	162055	162055	162055	162055	162055	162055	162055

Notes. This table presents the effect of the volume of land expropriation on our estimate. The dependent variable is the product of a dummy variable for whether the county has at least one land conflict or not in a month with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. In columns (1), I add the land area transacted in the baseline model as a controlling variable. In columns (2) to (7), I gradually control more controls, from the land area transacted in the last month to the land area transacted in the last six months in the model. In all the columns, other controlling variables include the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue and the population, the county Fixed Effects and calendar month Fixed Effects. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table 11: The role of fiscal pressure of local government

	(1)	(2)	(3)
	Outcome: land conflict		
	>=-24th month	>=-30th month	>=-36th month
policy_change	0.753*	0.815**	0.958**
	(0.412)	(0.393)	(0.375)
	(0.570)	(0.584)	(0.634)
high_pressure*			
	-0.367	-0.342	-0.505
policy_change			
	(0.523)	(0.504)	(0.485)
	(0.655)	(0.676)	(0.726)
Covariates	Y	Y	Y
County FE	Y	Y	Y
Year-month FE	Y	Y	Y
Mean of outcome	6.405	6.354	6.290
adj. R-sq	0.100	0.099	0.098
N	162055	175717	188650

Notes. This table presents the effect of fiscal pressure on our estimate. The dependent variable is the product of a dummy variable for whether the county has at least one land conflict or not in a month with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. high_pressure is a dummy variable, which equals 1 if the fiscal pressure is higher than the median, 0 otherwise. In columns (1), (2) and (3), I use the observations 24 months, 30 months and 36 months before the policy to control the pre-policy trend, respectively. In all columns, I control the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue, the population, the county Fes, calendar months and the interaction of high_pressure with time fixed effects. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table 12: The effect of compensation changes on other conflicts

	(1)	(2)	(3)
	Outcome: conflict		
	Wage conflict	Medical conflict	Home conflict
Policy_change	-0.199	0.102	0.304
	(0.252)	(0.160)	(0.219)
	(0.335)	(0.191)	(0.243)
Covariates	Y	Y	Y
County FE	Y	Y	Y
Year-month FE	Y	Y	Y
Mean of outcome	6.534	2.542	4.911
adj. R-sq	0.121	0.049	0.160
N	162055	162055	162055

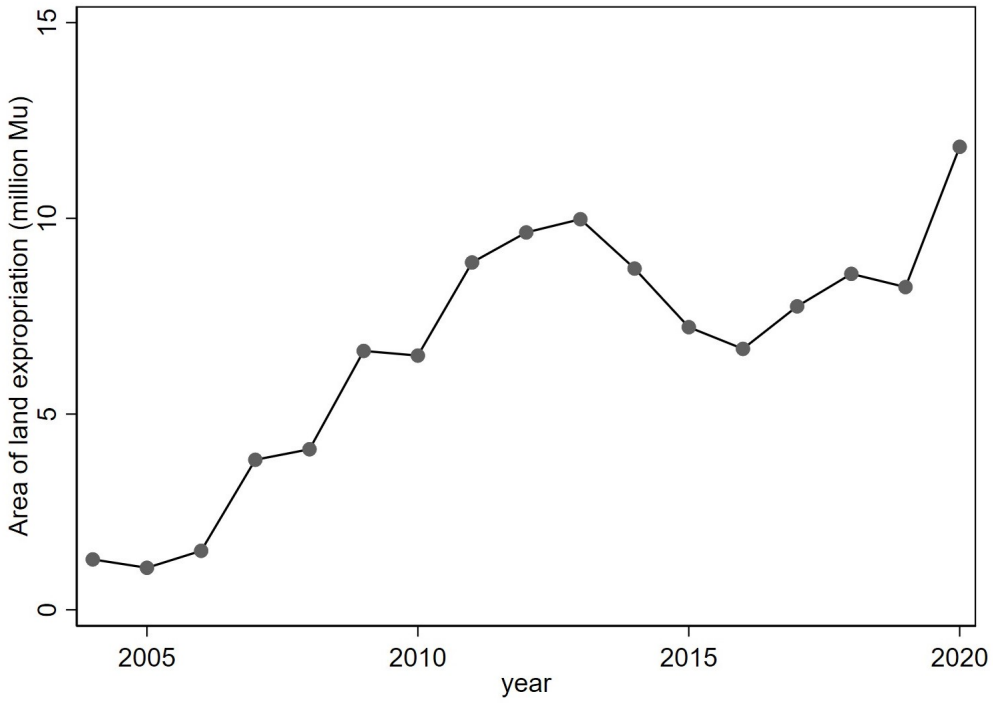
Notes. This table presents the effect of compensation change policy on non-land conflict. In columns (1) to (3), the dependent variable is the product of a dummy variable for whether the county has at least one conflict or not in a month with 100. Specifically, the dependent variable in column (1) is wage conflict, in column (2) is medical conflict and in column (3) is home ownership conflict. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. In all columns, I control for the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue and the population, the county Fes and calendar month Fes. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table 13: Administrative lawsuit cases and compensation policies

	(1)	(2)	(3)
	Outcome: whether there is at least one administrative lawsuit case		
	>=-24th month	>=-30th month	>=-36th month
Policy_change	0.038	0.077	-0.004
	(0.371)	(0.363)	(0.351)
	(0.338)	(0.335)	(0.326)
Covariates	Y	Y	Y
County FE	Y	Y	Y
Year-month FE	Y	Y	Y
Mean of outcome	3.922	3.908	3.870
adj. R-sq	0.072	0.069	0.066
N	40247	42407	44167

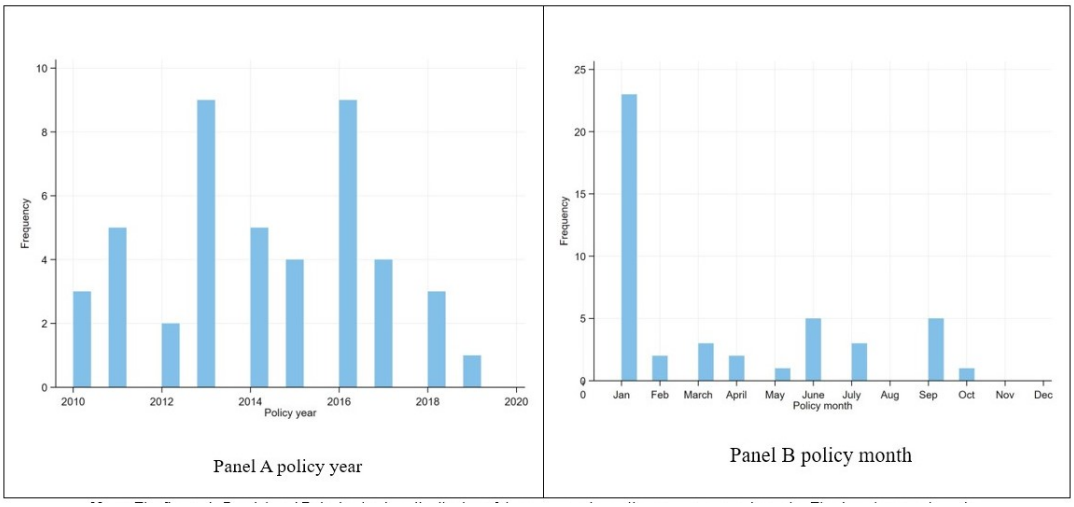
Notes. This table presents the effect of compensation change on the number of administrative lawsuit cases concerning land expropriation. The dependent variable is the product of a dummy variable for whether the county has at least one land conflict or not in a month with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. In columns (1), (2) and (3), we use the observations 24 months, 30 months and 36 months before the policy to control the pre-policy trend, respectively. In all the columns, I control variables like the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue and the population, as well as county Fes and calendar months Fes. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Figure 1: The trend of land expropriation in China



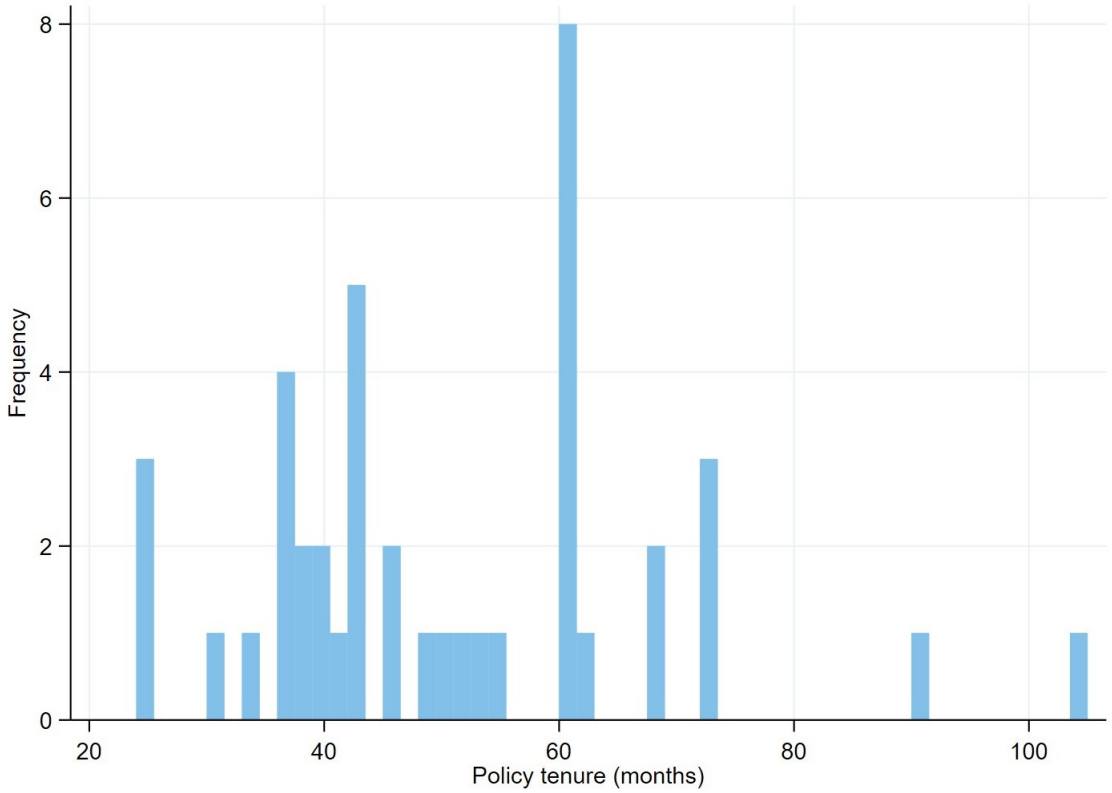
Notes. The data is collected from the website of the land transaction monitoring system, called the**China Land market**. I use the land transaction data in which the land is converted from collective-owned land to state-owned land (thus expropriated from farmers by the government).

Figure 2: The distribution of policy time



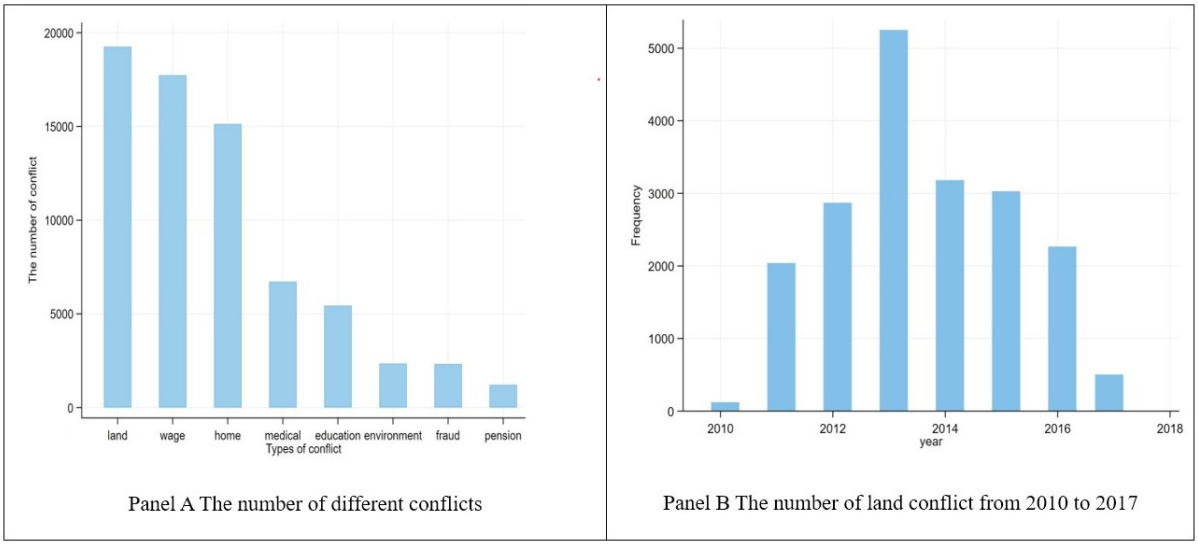
Notes. The figures in Panel A and B depict the time distribution of the compensation policies across years and months. The data is obtained from various governmental websites.

Figure 3: The distribution of policy tenure



Notes. The figure depicts the tenure of the compensation policy from 2010 to 2019. The data is obtained from various governmental websites.

Figure 4: The Number of conflicts

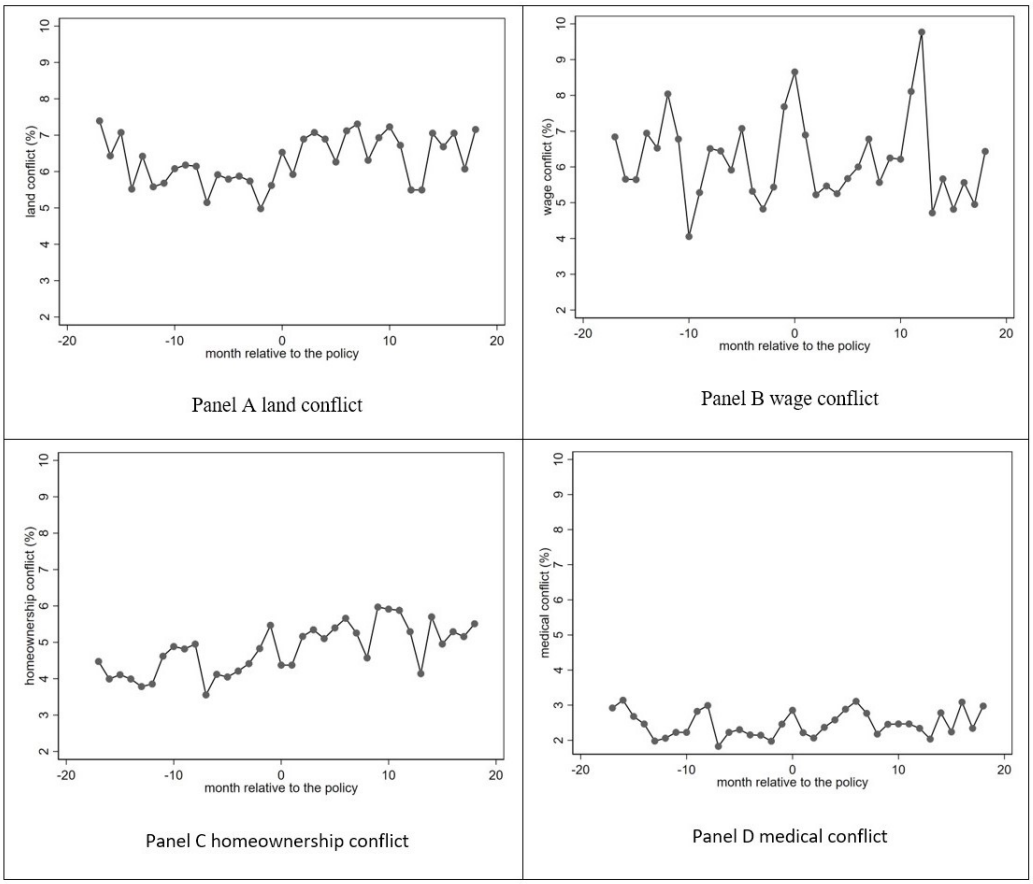


Panel A The number of different conflicts

Panel B The number of land conflict from 2010 to 2017

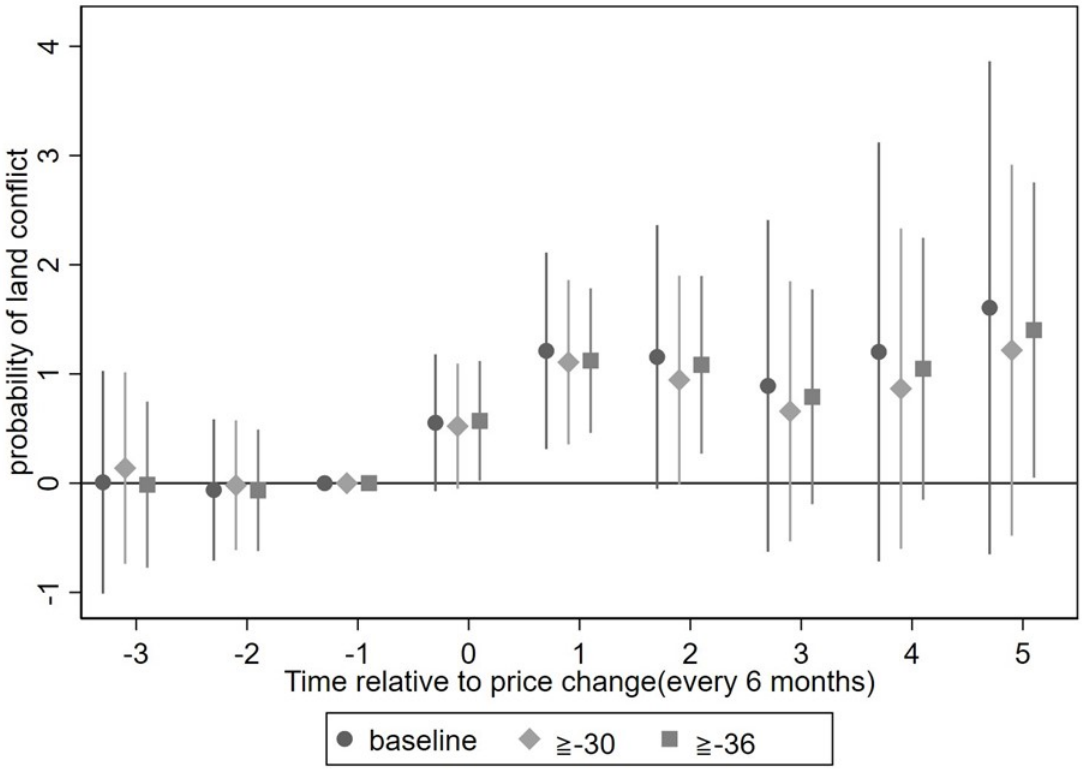
Notes. Panel A presents the number of various types of conflicts and Panel B presents the time trend of land conflict from 2010 to 2017. The data comes from CASM-China.

Figure 5: The trend of conflict



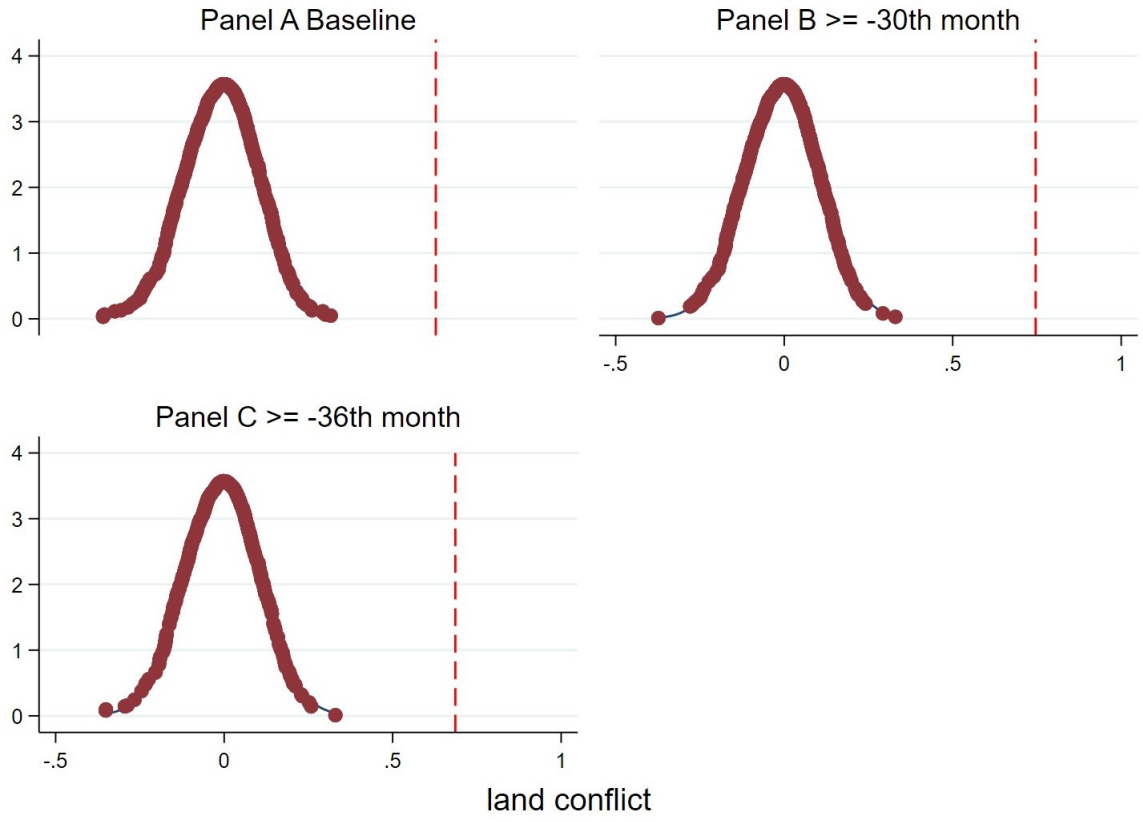
Notes. The figure depicts the trend in the probability of conflict before and after the compensation policy using raw data. Conflict data comes from CASM-China.

Figure 6: Event study estimate



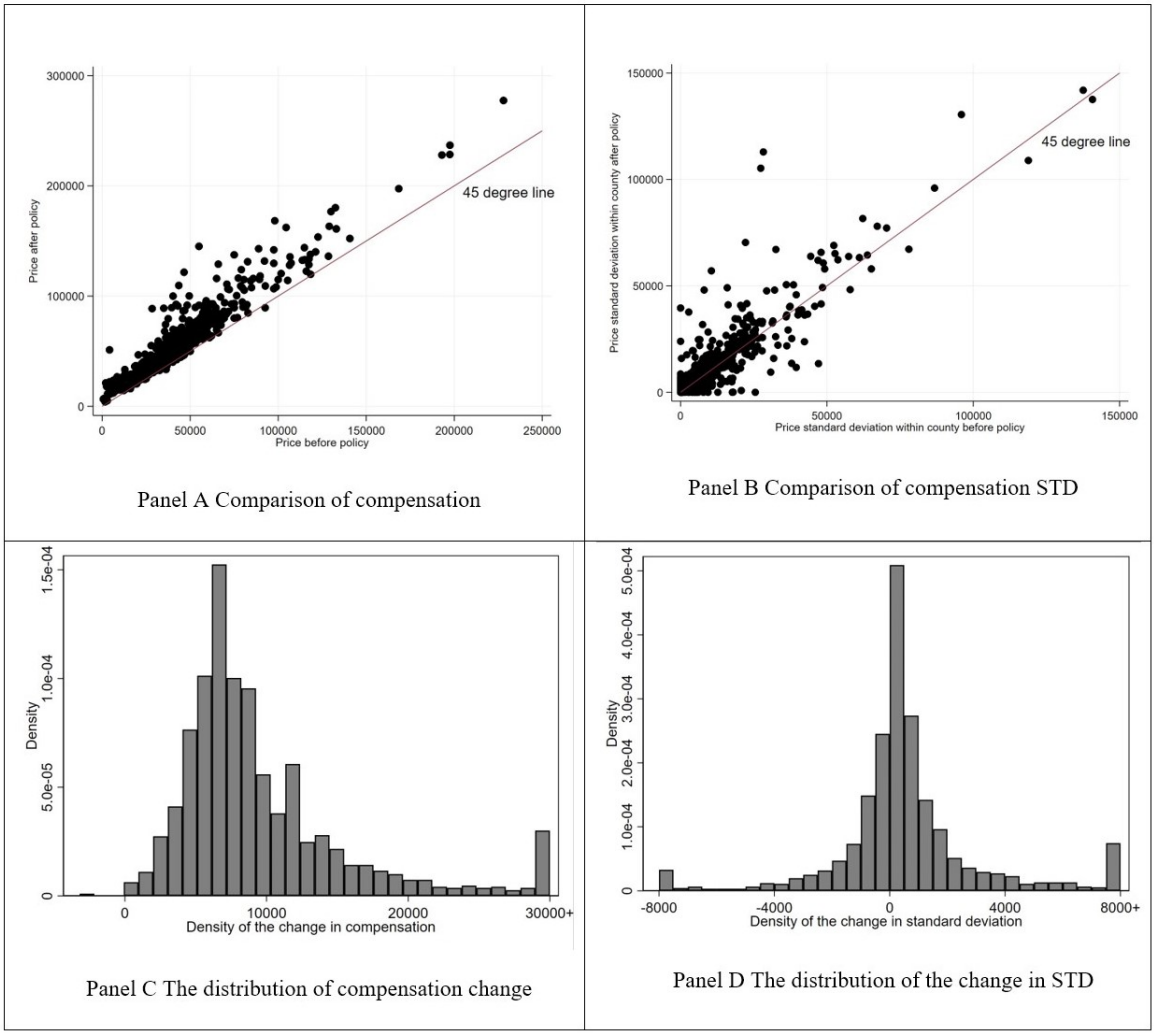
Notes. The figure depicts the event study estimates of columns (2), (4) and (6), Table 3. The dependent variable is the product of a dummy variable for whether the county has at least one land conflict or not in a month with 100. The regression controls for the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue, the population, the county Fixed Effects and calendar month Fixed Effects. Standard errors in parentheses are clustered at the county level. The dots and vertical lines represent the OLS estimators and 95% confidence intervals.

Figure 7: Falsification test



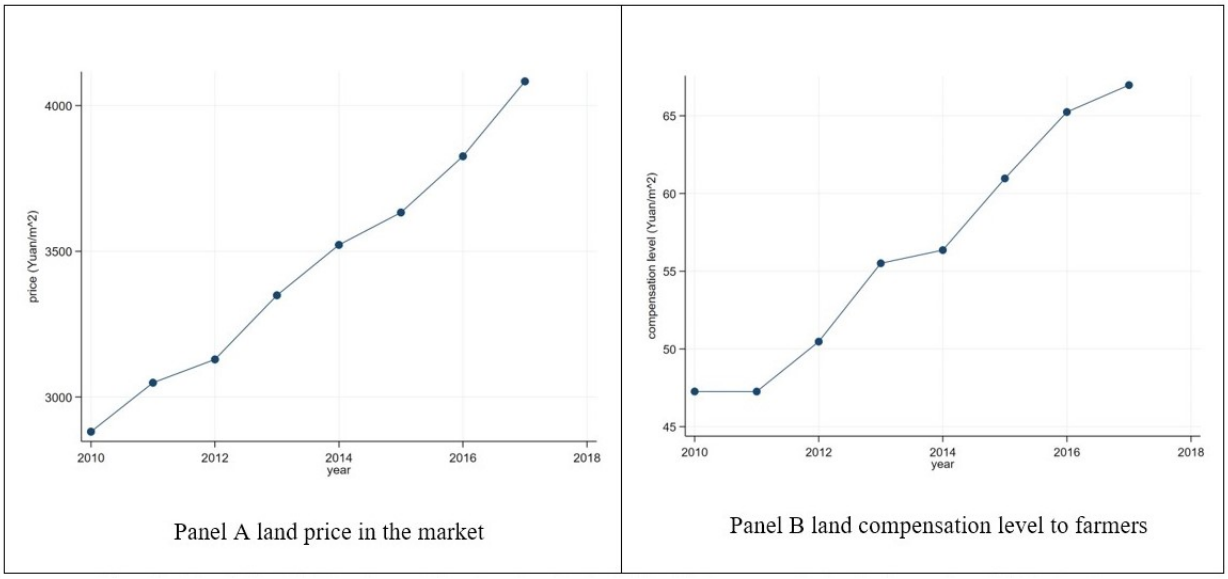
Notes. The figure depicts the distributions of the coefficients measuring the pseudo-treatment impact of compensation changes on land conflict using the baseline model by randomly assigning pseudo-exposure to compensation changes to control counties. The vertical dash lines indicate the scales of effects we find previously.

Figure 8: Price comparison before and after the policy



Notes. The figure in Panel A presents the relationship between compensation level before and after the policy. The figure in Panel B presents the relationship between compensation inequality (standard deviation within county) before and after the policy. The figure in Panel C presents the distribution of compensation change and the figure in Panel D presents the distribution of the change in compensation standard deviation. I collect the compensation level from various governmental websites.

Figure 9: Comparison of market value and compensation of land



Notes. The figure in Panel A depicts the trend of market value of land and in Panel B the compensation level to farmers (per m^2). The data about market price of land comes from China Land and Resources Bulletin from 2010 to 2017. The data about compensation level is obtained from various governmental websites and the compensation is a simple average of compensation across counties.

Appendix

Table A1: Compensation information of Weidu District, Xuchang city

order	District number	Street name	Villages	Price (Yuan/Mu)
1	411002001	Banjiehe	lizhuang, Sunwan,zhaowan,Sanliqiao,Banjiehe,Hewan	71400
2	411002002	Dingzhuang	Beiguan	69400
		Banjiehe	Tanggang	
3	411002003	Qilidian	Wulangmiao,Wuzhuang,Dongzhuang,Sunzhuang,Songzhuang	67500
		Dingzhuang	Dongshang,Hongshanmiao,Dingzhuang,Houliu	
		Xiguan	Sanli	
		Wuyi	Nianshang,Fangou	
4	411002004	Banjiehe	Xuwan,Chenzhuang,Jianzhuang,Liuzhuang,Dakenli,Shenzhuang	65300
		Gaoqiao	Zuzhuang,Xinzhang	
5	411002005	Qilidian	Zhouzhuang	64500
		xuchang	Luozhuang,Xuzhuang	
6	411002006	Xinxing	Peishan,Panyao,Nanguan	64400
7	411002007	Banjiehe	Magang	62000
8	411002008	Qilidian	Qilidian,Sunmiao	60000
		Gaoqiao	Daluozhuang,Gaoqiao	
		Dingzhuang	Yuanzhuang	
9	411002009	Xuchang	Laohuchen	57700
10	411002010	Qilidian	Fuxiaqi,Cuidaizhang,Pangzhuang	53600
11	411002011	Gaoqiaoying	Wangzhang,Guolou	53300
12	411002012	Gaoqiaoying	Jinwan	52900
13	411002013	Gaoqiao	Liutiezhuang,Laowuying,Donglizhuang,Banqiao	52900

Notes. This table presents the detailed compensation information of Weidu District, Xuchang city. I collect this information from the official websites of the provincial government.

Table A2: Intensive margin

	(1)	(2)	(3)	(4)	(5)	(6)
	Outcome: land conflict					
	Baseline		>=-30th month		>=-36th month	
policy_change	1.071*	1.051*	1.171**	1.154**	1.364**	1.349**
	(0.600)	(0.599)	(0.568)	(0.566)	(0.547)	(0.545)
	(0.636)	(0.633)	(0.592)	(0.592)	(0.596)	(0.596)
Covariates	N	Y	N	Y	N	Y
County FE	Y	Y	Y	Y	Y	Y
Year-month FE	Y	Y	Y	Y	Y	Y
Mean of outcome	9.365	9.365	9.305	9.305	9.253	9.253
adj. R-sq	0.103	0.103	0.101	0.101	0.098	0.098
N	162055	162055	175717	175717	188650	188650

Notes. This table presents the effect of compensation changes on the number of land conflict. The dependent variable is the product of the number of conflicts at county-month level with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. In columns (1), (3) and (5), I only control the county Fixed Effects and time Fixed Effects. In columns (2), (4) and (6), I add more controls, like the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue and the population. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table A3: selection in the timing of a new compensation standard

	(1)	(2)	(3)	(4)	(5)
	Outcome: policy tenure		Outcome: the months after the governors took office		
Pre-conflict	0.358				
	(1.712)				
Pre-fiscal pressure		0.782			
		(0.980)			
age			1.014		
			(0.819)		
graduate_degree				-2.903	
				(6.626)	
econ_major					-6.429
					(5.449)
Lastgovernor_tenure			-1.043	-0.960	-0.972
			(0.169)	(0.157)	(0.154)
Mean of outcome	33.615	33.615	33.615	33.615	33.615
adj. R-sq	-0.028	-0.010	0.523	0.504	0.521
N	36	36	36	36	36

Notes. The main dependent variable is the tenure of the previous compensation policy (month). This table presents how provincial characteristics or provincial governors' characteristics affect the timing of compensation policy at province level.

Table A4: CCDI's inspection from 2013 to 2017

Wave	Year	Months	Provinces Targeted
1	2013	May-August	Inner Mongolia, Chongqing, Guizhou. Hubei, Jiangxi
2	2013	October-December	Guangdong, Jilin, Hunan, Shanxi, Anhui, Yunnan
3	2014	March-May	Fujian, Xinjiang, Hainan, Shandong, Ningxia, Beijing, Tianjin, Henan, Liaoning, Gansu
4	2014	July-September	Heilongjiang, Qinghai, Hebei, Jiangsu, Shanghai, Shaanxi, Sichuan, Guangxi, Tibet, Zhejiang
5	2016	February-April	Liaoning, Shandong, Anhui, Hunan, Tianjin, Hubei, Jiangxi, Henan
6	2016	June-August	Tianjin, Hubei, Jiangxi. Henan
7	2016-2017	November-January	Gansu, Guangxi, Beijing, Chongqing

Notes. This information is derived from the report of the Central Commission for Discipline Inspection regarding its inspection activities.

Table A5: The effect of compensation policy on compensation price

	(1)	(2)
	std_price	avg_price
policy_change	802.584	10001.970
	(129.660)	(258.197)
Mean of outcome before the policy	6656.748	34406.680
adj. R-sq	0.909	0.869
N	3654	3654

Notes. This table presents the change of compensation level as well as the compensation inequality level within county.

Table A6: The role of compensation increases normalized by the compensation level

	(1)	(2)	(3)
	Outcome: land conflict		
	>=-24th month	>=-30th month	>=-36th month
policy_change	1.876***	1.741***	1.721***
	(0.498)	(0.489)	(0.486)
	(1.074)	(1.023)	(0.970)
policy_change *price_increase	-2.543	-2.946*	-2.912*
	(1.750)	(1.728)	(1.719)
	(4.373)	(4.295)	(4.126)
County Covariates	Y	Y	Y
County FE	Y	Y	Y
Year-month FE	Y	Y	Y
Mean of outcome	6.254	6.221	6.127
adj. R-sq	0.078	0.074	0.072
N	93040	101530	109589

Notes. This table presents the effect of compensation increase on our estimate. The dependent variable is the product of a dummy variable for whether the county has at least one land conflict or not in a month with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. Price_increase is the difference between the compensation level after the policy and before the policy at county level, and the compensation increase is normalized by the compensation level. In columns (1), (2) and (3), I use the observations 24 months, 30 months and 36 months before the policy to control the pre-policy trend, respectively. In all columns, I also control the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue, the population, the county Fes, calendar months Fes, and the interaction of price_increase with time fixed effects. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table A7: The heterogeneous effect of unfair compensation policy (normalized) across regions

	(1)	(2)	(3)
	Outcome: land conflict		
	>=-24th month	>=-30th month	>=-36th month
policy_change	0.840***	0.640**	0.658**
	(0.307)	(0.296)	(0.292)
	(0.623)	(0.605)	(0.620)
policy_change *higher_inequality	1.772***	1.675***	1.558***
	(0.468)	(0.454)	(0.445)
	(0.872)	(0.891)	(0.876)
County Covariates	Y	Y	Y
County FE	Y	Y	Y
Year-month FE	Y	Y	Y
Mean of outcome	6.254	6.221	6.127
adj. R-sq	0.078	0.074	0.073
N	93040	101530	109589

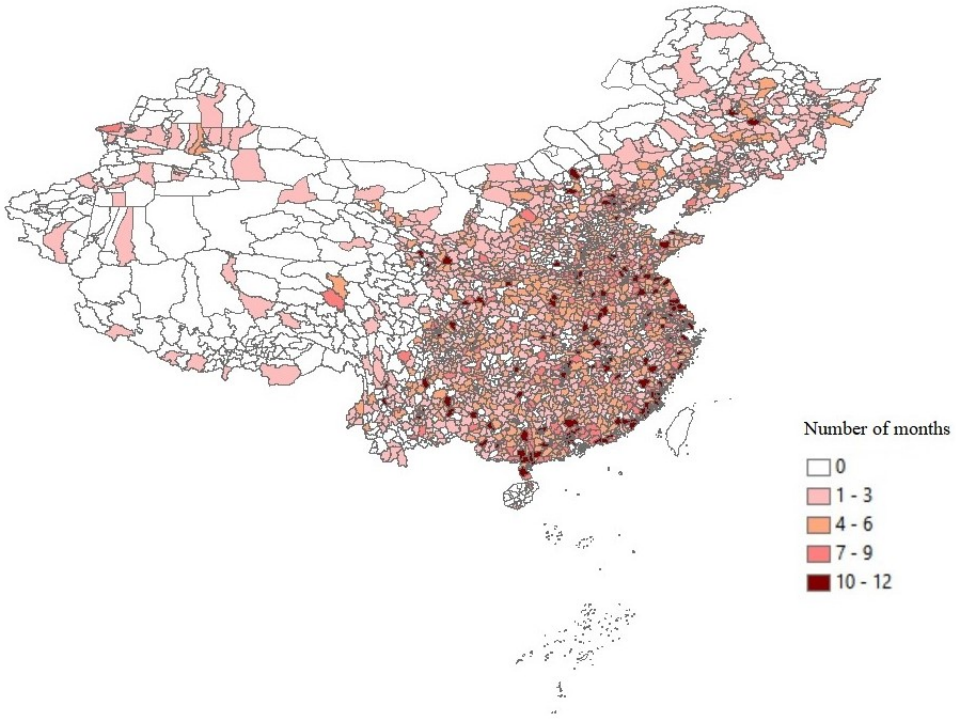
Notes. This table presents the effect of inequality of compensation within county (normalized by the compensation level) on our estimate. The dependent variable is the product of a dummy variable for whether the county has at least one land-related conflict or not in a month with 100. $policy\_change_{pt}$ equals one if the county in province p has a new compensation standard at time t and zero otherwise. higher_inequality is a dummy variable indicating if the county has a larger inequality level in compensation after the policy than before the policy. In columns (1), (2) and (3), I use the observations 24 months, 30 months and 36 months before the policy to control the pre-policy trend, respectively. In all columns, I control for the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue, the population, the county Fes, calendar months Fes, and the interactions of higher_inequality with time fixed effects. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Table A8: The robustness check: compensation policy across regions

	(1)	(2)	(3)
	Outcome: land conflict		
	>=-24th month	>=-30th month	>=-36th month
policy_change	1.457***	1.197**	1.083**
	(0.522)	(0.501)	(0.497)
	(0.767)	(0.723)	(0.709)
policy_change *price_increase	-0.920***	-0.916***	-0.762**
	(0.342)	(0.327)	(0.338)
	(0.588)	(0.566)	(0.556)
policy_change *higher_inequality	1.270***	1.319***	1.234***
	(0.453)	(0.447)	(0.443)
	(0.836)	(0.781)	(0.765)
County Covariates	Y	Y	Y
County FE	Y	Y	Y
Year-month FE	Y	Y	Y
Mean of outcome	6.254	6.221	6.127
adj. R-sq	0.077	0.074	0.072
N	93040	101530	109589

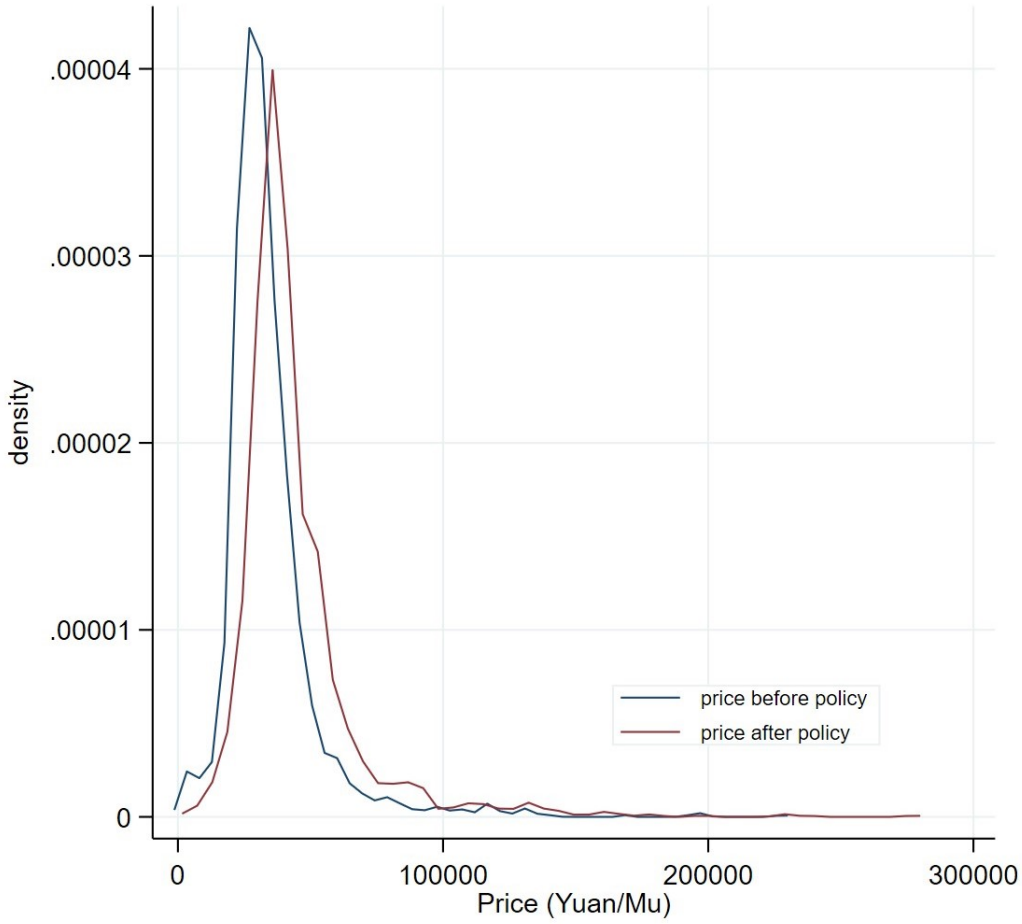
Notes. This table presents the effect of compensation increase and the inequality of compensation within county on our estimate. The dependent variable is the product of a dummy variable for whether the county has at least one land conflict or not in a month with 100. policy_change is an indicator that equals one if the county implemented a new compensation policy and zero otherwise. higher_inequality is a dummy variable indicating if the county has a larger inequality level in compensation after the policy than before the policy. In columns (1), (2) and (3), I use the observations 24 months, 30 months and 36 months before the policy to control the pre-policy trend, respectively. In all columns, I also control the prefecture level GDP per capita, industrial structure, the ratio of fiscal expenditure to fiscal revenue, the population, the county Fes, calendar months Fes, and the interaction of price_increase and higher_inequality with time fixed effects. Standard errors in parentheses are clustered at the county level and province level, respectively. * Significant at the 10 percent level. ** Significant at the 5 percent level. *** Significant at the 1 percent level.

Figure A1: The distribution of conflict across counties



Notes. The figure presents the number of months with land conflict at county level. The data comes from CASM-China.

Figure A2: Compensation distribution



Notes. The figure presents the distribution of compensation level across counties. I collect the compensation level from various governmental websites.